

# **THE HAVELIS OF RAJASTHAN FORM AND IDENTITY**

**Shikha Jain**

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for the degree of PhD

**PRASADA, De Montfort University, Leicester**

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# Abstract

The research addresses the issues relating to the interpretation of traditional architectural forms and identifies factors that determine their regional identity. The work focuses on the medieval house form of northern India, epitomized as '*haveli*', in the state of Rajasthan. It aims to study the generic form and the specific formal variations of the *havelis* in the context both of unified Rajasthan and of its sub regional diversities.

The outcomes of the research work are at two levels:

Firstly, the study establishes the characteristics of the generic form by analyzing the socio-ritual activities, formal linguistics and construction methods, which underlie it. The nature of the form itself allows interpretation that corresponds to recurrent ideas in Indian philosophy. The spatial, formal and technological vocabularies of the *haveli* form reflect the fact that the centric evolution of the form conforms to the traditional Indian worldview, in which everything emanates from the centre. In this process, by defining the centres and sub centres, the research also evolves a methodological framework, which can be used for interpreting other traditional Indian forms.

Secondly, the work identifies the sub regional variations of the form, and provides a comprehensive classification of the *havelis* of Rajasthan. Along with documentation of eighty *havelis* in different regions of Rajasthan, the work examines the various determinants of the *haveli* form, and shows how the regional variations arise from social, political and geographical factors such as occupation, caste, topography, and available material.



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- And special thanks to the *haveli* residents who provided me with sketch plans of their *havelis* that are reproduced in this research – Rishikesh Sharma in Jaipur, Rakesh Bhatt in Jaipur, Nachna Thakur in Jaisalmer, Mr. Sharma of Suraj Hotel in Jaisalmer, Bade Devta in Kota, Mr. Kothari in Banswara and owner of Mammayon ki Haveli in Udaipur.

The author has produced all drawings and photographs in the research work, unless stated otherwise.



# 1 Introduction and Methodology

The interpretation of traditional dwellings and the question of regional identity are issues that have gained significance in contemporary scholarship. In the Indian context, too, there is a recent focus on the study of vernacular architecture and a search for regional roots.

The research focuses on the traditional medieval dwellings of Northern India termed '*havelis*'. This particular house form dominated the urban fabric of North Indian towns for about five centuries (1550-1950 A.D.). It was epitomized as '*haveli*' with the influence of the Mughals, around the middle of the sixteenth century, and became the symbol of the aristocratic house. *Havelis* are present in the majority of North Indian states, namely Rajasthan, Gujarat, Delhi, Haryana, Uttar Pradesh, Bihar, parts of Bengal and even across the border in Pakistan for example in Sind and Lahore (Figure 1.1).

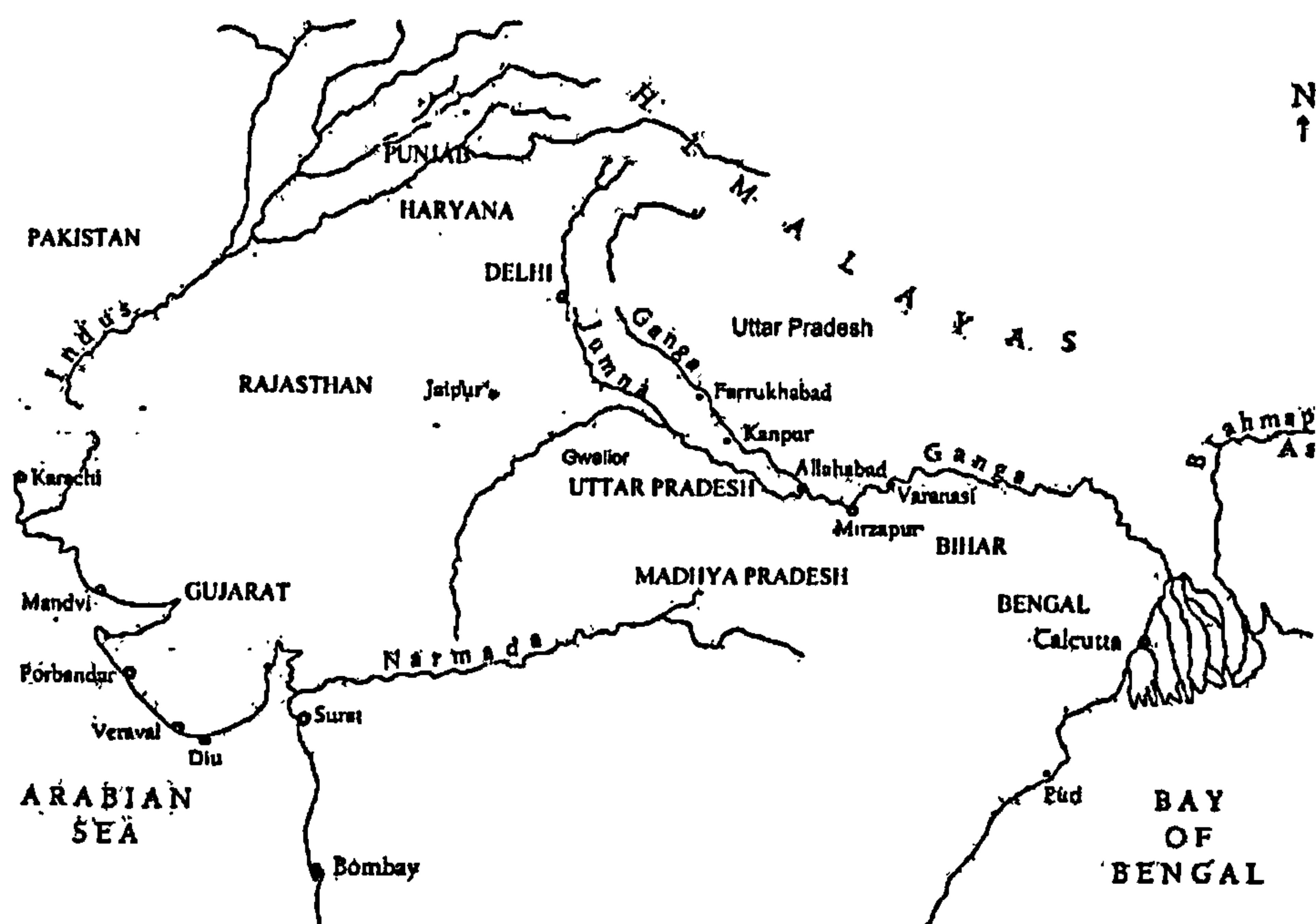


Figure 1.1 – Map of Northern India showing regions with *havelis*.



It is the state of Rajasthan that has the greatest diversity of *havelis*. In Rajasthan, the Rajput rulers initiated the building of *havelis* in the 16<sup>th</sup> century to provide an ideal accommodation to their courtiers and nobles. *Haveli* was a symbol of official recognition. By the end of the eighteenth century, due to financial reasons, the patronage of making *havelis* shifted in the hands of rich Hindu traders. This trader class flourished during the British rule and built grand *havelis* in their hometowns in Rajasthan, till the beginning of the twentieth century. Despite centuries of intercultural exchanges, this house form survived to cater for the socio-cultural needs of the society, until the enforced adherence to colonial zoning ruled out the possibility of this form. Although, the new house form is no doubt more suitable in the contemporary cultural situation, it could never attain the regional aura, associated with the earlier house form of the *haveli*. And recently, a need to rediscover the roots, in search of regional 'paradigms', is felt in the current architectural milieu. Majority of the population in Rajasthan is still bound in traditions and the interpretation of traditional forms becomes essential for architects, historians and conservationists. The study of traditional forms provides a model for the dynamic reinterpretation of the contemporary designs.

The work focuses on the development of this form in Rajasthan state of North India. Despite the Mughal and British attempts at classifying the princely Rajput towns in a single zone, strong sub regional identities persisted. Due to their diverse political, physical and cultural factors, the medieval towns of Rajasthan offer a rich variation of this particular archetype. Although, a majority of these historic *havelis* are present in the state of Rajasthan, yet, a comprehensive work on the *havelis* of Rajasthan is still lacking. This research includes a survey of more than 150 *havelis* and original documentation of around eighty *havelis* in



different regions of Rajasthan. In the past decade, significant documentation work has been done on the *havelis* of Gujarat (V.S. Parmar, 1990), the *havelis* of old Delhi (Sunand Prasad, 1987, Pavan Verma, 1992) and *havelis* in a few towns of Rajasthan (Kulbhushan Jain, 1987). Most of the previous works incorporate architectural documentation describing the historical styles or interpret the traditional forms in terms of complex religious doctrines and metaphysical connotations. In an attempt to study the physical and the metaphysical, a significant factor of the human condition is often lost. Crucial anthropological aspects of space have not been inspected. This research begins with existential and anthropological inquiries of the spatial structure and then reinterprets the physical form and the metaphysical ideas rooted in the worldview. It aims to balance the anthropological data by integrating it with construction, technology and formal principles guiding the physical form.

Secondly, despite a rich variation of the form, there has been no attempt at a sub regional classification of the *havelis* in the state of Rajasthan. The primary objective of this thesis is to provide a comprehensive taxonomy for the *havelis* of Rajasthan with an in-depth inquiry into the evolution of this form and its meaning. The internal spaces as well as external structure of the *havelis* is analyzed with an aim to establish a) the principles behind the generic form and b) the typological variations with place, caste and construction materials that establish the adaptability and versatility of the *haveli* form. After deriving the generic principles of the form, the research moves onto establish specific typologies needed to identify the *havelis* based on social, material and formal classification. Some relevant iconographical details are also documented, but a stylistic analysis is clearly not the focus in this study. The *haveli* is a social product and the design patterns are a result of the whims and fancies of a



particular owner rather than stylistic trends. This work aims to study the generic *haveli* form of unified Rajasthan and the specific formal variations in the form arising due to the sub regional diversities. It goes beyond the basic composition of the *haveli*, to study the peculiarities of these *havelis* at a sub regional level and to describe the similarities and differences that derive from the diverse context, beliefs and values. Before selecting the methodological basis for the research work, it is essential to define two parameters of the study : a) The region, Rajasthan and b) The archetype termed '*haveli*'.

## 1.1 Defining the Region

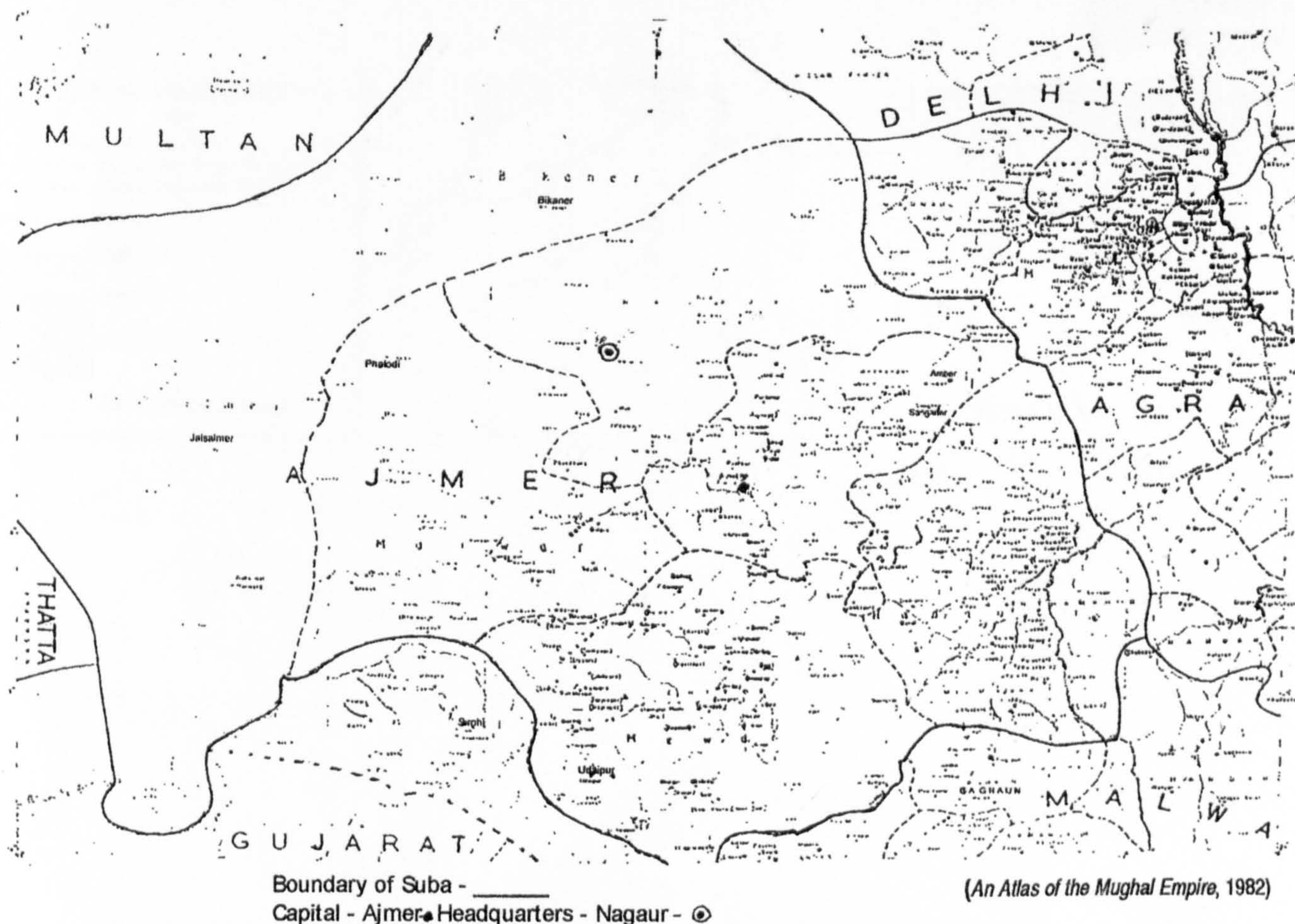
Regional boundaries can be defined geographically, politically and culturally. Rajasthan was classified as '*subah*' by the Mughals, and later on as 'Rajputana Agency' by the British. Despite these imposed political boundaries, a strong need to emphasize individual identity prevailed among the ruling Rajputs. Rajasthan was always an assemblage of warring princely states with sub regional identities. This reflected in the cultural milieu with different styles of paintings, variation in the local dialect and even in minor aspects like the style of tying turbans, keeping moustaches and the pattern of *jooties* (footwear).

Deryck O. Lodrick<sup>1</sup> in his essay 'Rajasthan as a Region' describes the identification of a region in two ways. One is the perceived space or experienced region which 'represents a people's shared reaction to their particular segment of space, or specific features associated with that space, that leads to an awareness of its distinctiveness.'

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<sup>1</sup>The Idea of Rajasthan, Vol. 1., 1994. p.4





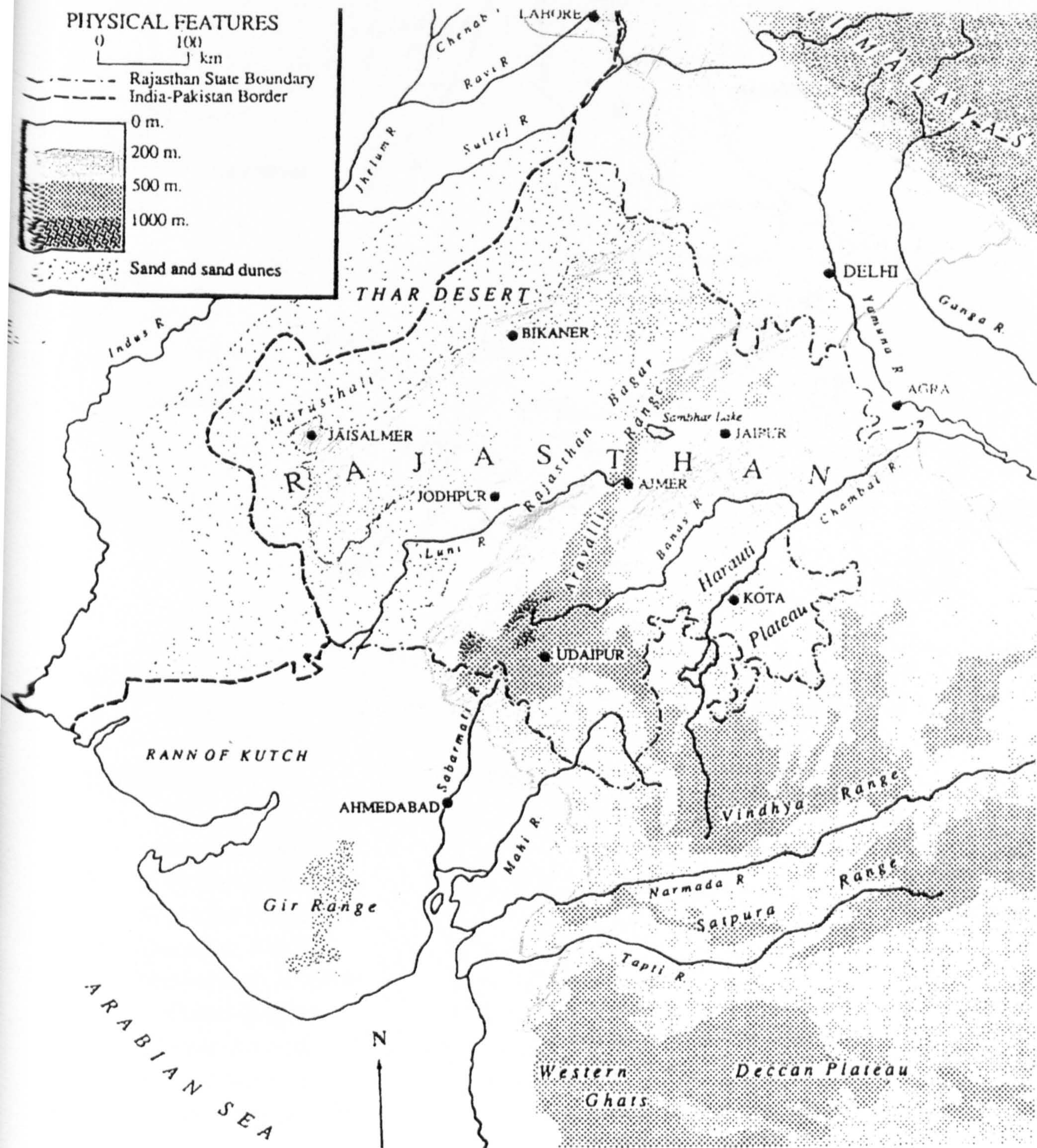
**Figure 1.2 - Political Map of Rajasthan in 1595 as a Mughal Subah**



(The Idea of Rajasthan Vol.1, 1994)

**Figure 1.3 - Rajasthan as Rajputana Agency**

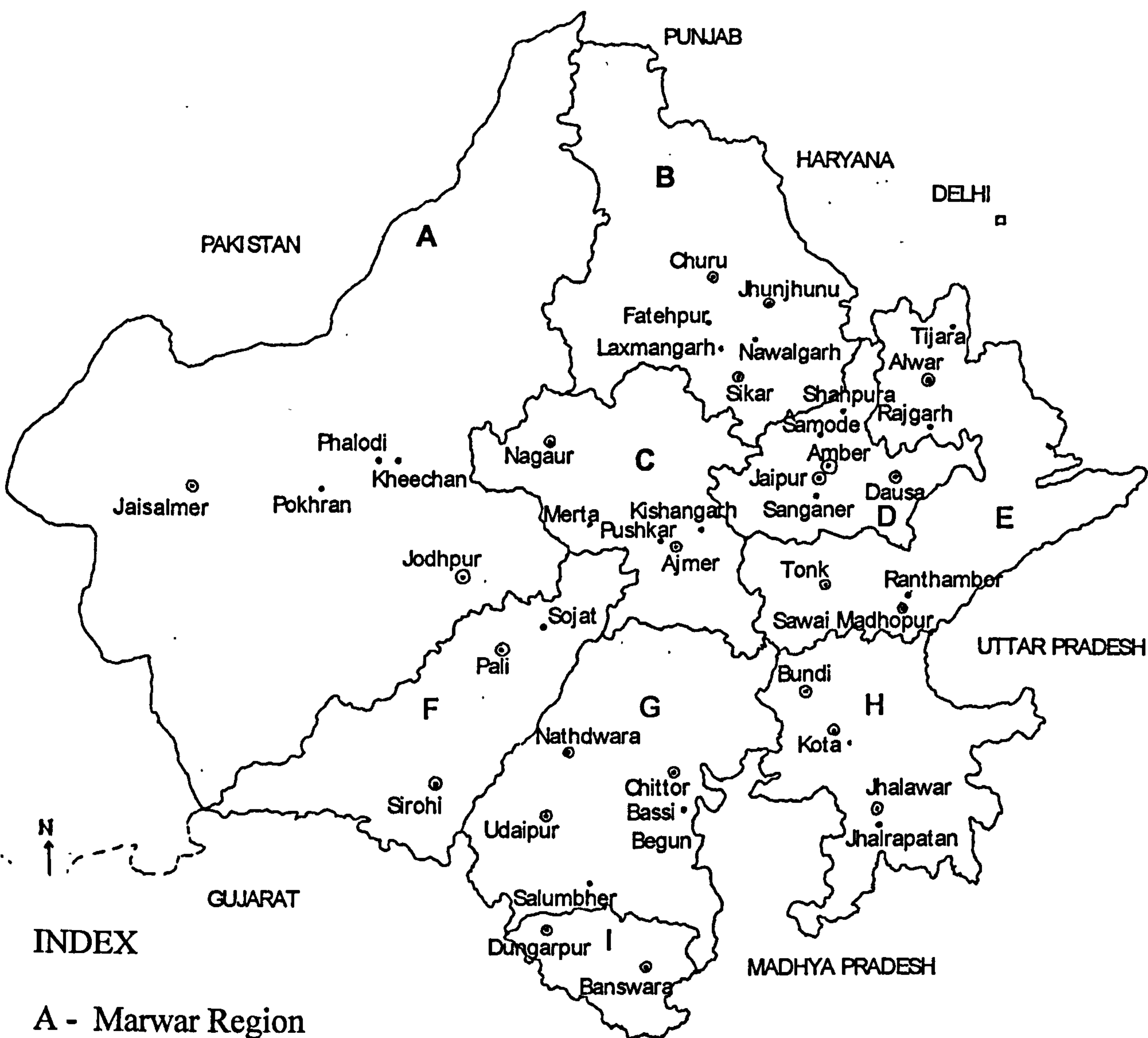




(The Idea of Rajasthan Vol. 1, 1994)

**Figure 1.4 - Geographical Map of Rajasthan Region**





## INDEX

- A - Marwar Region
- B - Shekhawati Region
- C - Merwara Region
- D - Dundhar Region
- E - Mewat Brij Region
- F - Godwad Region
- G - Mewar Region
- H - Hadoti Region
- I - Vagad Region

Towns Covered in the Fieldwork  
 Capitals – ●  
 Thikanas and smaller towns – •

**Figure 1.5 – Sub Regional Demarcations of Rajasthan based on Dialect and Ruling Clan and Towns covered in the Fieldwork.**



The second way is the ‘instituted or denoted region from an external perspective’ – usually a political region. The political boundaries of the present day Rajasthan started taking shape during the Mughal rule between 13<sup>th</sup> and 16<sup>th</sup> centuries. The Mughal *subah* of Ajmer was established in 1595 A.D. (Figure 1.2). These boundaries do not include the town of Siorhi, which is shown in the Gujarat *subah*, and the towns of Mewat Brij region like Alwar and Tijara, which fell under the Agra *subah* in the Mughal period. The modern Rajasthan falls more in line with the boundaries of the ‘Rajputana Agency’ established two centuries later by the British (Figure 1.3). These political boundaries of Rajasthan are being used for the purpose of this study, since the Mughal and the British period also demarcate the origin, development and decline of the *havelis* in Rajasthan.

Rajasthanis are loyal to socio-cultural and geographic space, hence the research also acknowledges the significance of geographical, social and perceptual factors that indicate sub regions within these politically defined regions. Geographically, the Aravalli range defines the region into two sections. The range runs from Northeast to Southwest for over 600 kilometers and divides the region into Eastern Rajasthan and Western Rajasthan. It increases in width, complexity and altitude from Northeast to Southwest direction. Climatically, it separates the Thar Desert of the West from the plains and plateaus in the eastern region (Figure 1.4).

The desertland of Rajputana (abode of Rajputs) lies wedged between 2 major river systems of the Indian subcontinent-starting from its apex, the sacred Mt. Abu, rising above 3000’ higher than the terrain around Aravalli (‘Ar’ meaning hill of strength) sends its branches North to a distance of over 300 miles, forming the great divide between upland Mewar in the East and low sandy region of Marwar



in the West. The Aravalli range averages from 6-15 miles in width and loses its height gradually as its offshoots terminate near the Jamuna bank- now known as the Delhi Ridge.<sup>2</sup>

This diverse topography and climate of Rajasthan has a direct impact on the architectural form and construction materials.

Even culturally, the different towns of Rajasthan show a great diversity. In Rajasthan, 'people mentally order subjective space according to criteria that include caste, former landholders, dialect, history, the physical environment and economic patterns'.<sup>3</sup> Language and the former princely state are two of the strongest determinants for defining subjective space in Rajasthan. To account for this sub regional division – the political boundaries of Rajasthan are further divided into nine zones - Dundhar, Godwad, Hadoti, Marwar, Merwara, Mewar, Mewat-Brij, Shekhawati and Vagad (Figure 1.5). Amongst these sub regions, Dundhari, Hadoti, Marwari, Mewari and Mewati are five distinguishable dialects. Shekhawati, named after the local rulers came under the Dundhar region and Godwad and Vagad regions fall under the tribal belt that moves down in the state of Gujarat.

Since cultural influences extend beyond the political boundaries, the last section of the research compares the various *havelis* in different parts of Rajasthan with *havelis* of surrounding states such as Gujarat, Haryana, Punjab, Uttar Pradesh, and Madhya Pradesh and of Lahore in Pakistan.

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<sup>2</sup> Mulk Raj Anand. *Marg* Vol 30, p.4

<sup>3</sup> Lodrick O. Deryck. *The Idea of Rajasthan*, Vol.1, 1994.p.27



## 1.2 Defining '*Haveli*'

No previous work gives a clear definition of the term '*haveli*'. Its etymological roots are uncertain. Sunand Prasad (1987) traces the etymological origin to '*haowala*' meaning partition in old Arabic. He also mentions the terms '*hawaleh*' meaning all round or 'round about' and the Persian word '*haveli*' with the same meaning. It is evident that the Mughals used this term for defining a piece of land like the English term 'estate'. The initial usage of this term in Rajasthan was probably at the time of defining the Mughal *subah* of Ajmer, which mentions the terms 'Jodhpur *ba Haveli*', 'Nagaur *ba Haveli*', 'Ranthambor *ba Haveli* and', 'Ajmer *ba Haveli*'.<sup>4</sup> This indicates territorial demarcation of certain areas and structure in these towns that were termed *havelis*. Initially used for land as estate, later on the term was used for the land along with the dwelling on it.

Since a range of dwellings is found in most medieval towns it is important to distinguish the *haveli* from other dwellings or common houses. The problem with the definition of this term in previous works is that it was limited to physical observations and hence, incomplete. Among these definitions are: mansion built around at least one courtyard (Ilay Cooper 1987) or a large residential mansion (Pramar 1989). Sunand Prasad (1987) defines the term *haveli*-type houses, which could be interchanged for medieval courtyard houses. Using the above definitions any medieval dwelling with a court or a bigger mansion could be a *haveli*. But, the initial fieldwork revealed that no physical distinction of a *haveli* is possible on the basis of presence of courtyard, scale of structure or façade embellishments as they range from a simple single courtyard small structure with minimal decorations to huge palatial complexes with a



number of courtyards. Physical identification at times might be misleading.<sup>5</sup> Also, the presence of court is not essential although it is rare to find medieval dwellings in Rajasthan without a court. But there are rare examples like Saraf *Haveli*, Jaipur, Alsisar *Haveli*, Jaipur and Golcha *Haveli*, Kheechan, which do not have the traditional court. Hence, a social definition of *haveli* is more relevant. Interviews and inquiries from the locals revealed that *haveli* is a magnificent residence related to the social status of the owner. The closest definition of the term is mentioned in an exhibition on *havelis* in the Prince of Wales Museum at Mumbai (1989).

By the way, a *haveli* generally means a mansion. But, in totality, it symbolizes generation who articulated their lifestyle that includes architecture, customs and manners, of course arts, crafts and music. The *havelis*, however are the official residences of *umraos*, princes, *thakurs* and others such as *dhabhai*, *purohit* and *sethji* who were given a special status by the *rana*. *Haveli* has official recognition.<sup>6</sup>

Clearly, the term has no meaning without the patronage or the aristocratic class, who were the forerunners in promoting the *havelis*. The *havelis* of Rajasthan were mansions belonging to Rajput estate owners or *thakurs* of the *thikanas* (estates), affluent Hindu traders (also termed *Marwaris*), the Muslim nobles, ministers, royal doctors or *hakims*, a few Brahmin royal priests called *rajpurohits* and others who managed the royal departments as *Kotharis* (treasury incharge) *Dhabhais* (nurse to the royal family), *Bhandharis* (store incharge) and *Dadu-Panthis* (religious advisors) etc.

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<sup>5</sup> Based on an interview with Mr. Sharma, owner of Hotel Suraj, a *haveli* in Jaisalmer fort . In case of Jaisalmer, the carvings in each house compares to that of the bigger mansions and purely on a physical identification, each house can be considered as a *haveli*. But within the fort itself, there are only four *havelis*.

<sup>6</sup> In a brochure of the exhibition obtained from Dhabhai *Haveli*, Udaipur.



A basic identification of *havelis* in any medieval town of Rajasthan is possible by identifying the original owner and his official status under the ruler. These were medieval mansions belonging to nobles who served the Rajput rulers, clearly demarcating themselves from the houses of the subordinates and common people. These mansions were a symbol, of the social status, next in hierarchy to the ruler's abode, and were even visited by the ruler on special occasions. In a number of cases where the Rajput ruler married a *thakurs'* daughter, the marriage ceremony of the ruler took place in the *haveli* court.<sup>7</sup>

### 1.3 Previous Work

Existing research works related to the subject are identified in two sections. First section discusses specific works on the *havelis* in Northern India and the second section discusses works regarding methodological framework for interpreting traditional dwellings and settlements.

#### a) Specific research on *havelis* in North India<sup>8</sup>

Kulbhushan Jain (1987) initiated research work on *havelis* of Rajasthan. His book '*Indian City in the Arid West*' (1987), covers the morphology of a few major cities like Jaipur, Jodhpur, Jaisalmer and Udaipur in the state of

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<sup>7</sup> The wedding ceremony of Jaipur ruler Jagat Singh with the daughter of Geejgad *Thakur* took place in the courtyard of Geej gad *Haveli* at Jaipur as described in the Hindi Language fiction *RasKapur*, 1994.

<sup>8</sup> Cooper, Ilay, *The Painted towns of Shekhawati*, Mapin Publishing Ltd. U.S. 1994

Jain, Kulbhushan. *Indian City in the Arid West*. AADI Centre. Ahmedabad. 1987

Gupta, Vinod. *A Study of Natural Cooling System of Jaisalmer*. PhD. Thesis. IIT Delhi. 1984

Pramar, V.S., *Haveli .Wooden Housees and Mansions of Gujarat*. Mapin Pub. Pvt. Ltd., 1989

Prasad, Sunand. *The Havelis of North Indian Cities*. Unpublished study for the Visual Islamic Art Unit of the Royal College of Art, London. 1987

Tillotson, Sarah. *Indian Mansions.A Social History of the Havelis*. Orient Longman, New Delhi. 1998

Verma, Pavan. *Mansions at Dusk. A historical overview of a few Shahjahanabad Havelis*. Spantech Publishers. 1992

Nath, Aman and Francis WacZirag,. *Rajasthan. The Painted Walls of Shekhawati*. Vikas Publishing House Ltd. New Delhi. 1982



Rajasthan. These cities show a great variation in the geographical, social and political structure, but Kulbhushan Jain only describes the generic form of these settlements. Although his work is significant as a pioneer attempt at documentation of traditional domestic architecture in Rajasthan, the description and analysis inclines towards a modern rhetoric. His modernist outlook is clearly expressed in the article 'Spatial Organization and Aesthetic Expression in the Traditional Architecture of Rajasthan' in *Paradigms of Indian Architecture* (1998). He categorizes the built form into functional elements that are concurrent with the modern views and the 'decoration' that is beyond the modern outlook. His work is more of a general description of the spaces, structure and exterior form of *havelis* without any attempt to establish the inherent organizing principles in the form. Although, he concludes that 'traditional architecture of Rajasthan has developed a systematic way of building and 'well developed language', but there is no attempt to decipher the language. Kulbhushan Jain has stated that the problem of understanding the traditional architecture is beyond modern principles; but has not given any indigenous method for reading the form.

Sunand Prasad (1987) focused on the cultural transformation of the dwellings from the *haveli* type to the villa type. His research work is significant because of its emphasis on domestic architecture and the comparison of two Indian paradigms, medieval and modern – evaluating the validity of the traditional form in the contemporary cultural context. Based on the anthropological dimensions defined by Amos Rapoport (1969), the research evaluates the socio-cultural issues related to the problem. The research also touches upon some significant comparisons on the surface, such as the Hindu-Muslim *havelis*, imagery in built form etc. - but does not get into a detail study. Hence, formal observations are



based on insufficient samples and, conclusions such as Hindu *havelis* have a smaller courtyard than the Muslim ones are quite misleading. The criterion for a possible classification of *havelis* is not clear as it is based on a general survey only. There are no criteria for the samples selected for comparison such as *haveli* and villas of owners of comparable social status, comparable size of plot etc. The methodology has drawbacks of the conventional anthropological outlook, as mentioned by Egenter (1992) – ‘a vague definition of culture’ and ignoring ‘existential dimensions’. A number of culturally relevant issues are dealt with, and the work is significant in terms of documentation. But no significant conclusions about the *haveli* form, or its type emerged from the work. His work primarily focused on the relevance of the courtyard type house in the contemporary Indian situation.

V.S.Pramar (1989) has done a most commendable and exhaustive work on the *havelis* of Gujarat. Despite a few limitations of a historical outlook, it is an excellent and comprehensive documentation of the dwelling units of Gujarat. The work includes remarkable research of construction material and techniques, tracing historical evidences (synchronic and diachronic) within and outside India and highlighting the indigenous qualities of Gujarat. The research moves from study of the social setting to the settlement pattern and the individual plans. The work incorporates a rich documentation and classification of *havelis* in the state of Gujarat. Using existential dimensions – such as territoriality in the comparison of the four basic settlement patterns could have further enhanced the analysis.

Other works on North Indian *havelis* are in piecemeal and focus on specific issues such as Vinod Gupta’s (1984) work on climatological aspects of *havelis*



in Jaisalmer, Sarah Tillotson's (1998) description of the social history of *havelis* in Northern India, Pavan Verma's (1992) historical description of Shahjahanabad *havelis* and Aman Nath's (1982) work on paintings in Shekhawati *havelis*. Students' thesis and dissertations in Architecture colleges at Ahmedabad, Delhi and Jaipur include documentation of a few *havelis* in the towns of Bundi, Nathdwara, Amber, Jaipur, Jodhpur, Jaisalmer and Shekhawati. A few drawings from these are included in this research.

The problem with the definition of the term '*haveli*' in these works has already been discussed. Besides, the anthropological dimensions of space, crucial in this archetype have always been overlooked. Since Rajasthan has maximum diversity within this archetype a detailed analysis of the *haveli* form across Rajasthan is essential. But there is no existing comprehensive work on the *havelis* of Rajasthan addressing the typology and the sub regional variations. This presents a lacuna in the research work on *havelis* of Northern India that needs to be filled. This research is the first attempt at a comprehensive overview of the *havelis* in Rajasthan covering more than forty towns in the state.

## **b) Definitions and Methods for interpretation of traditional dwellings.**

The relevance of purely formal studies in vernacular architecture became debatable with the advent of the anthropological approach in architectural theory. Amos Rapoport's revolutionary study *House Form and Culture* (1969) introduced a new dimension in the study of domestic architecture, showing the cultural impact on form. Around the same time, Christian Norberg Schulz's *Intentions in Architecture* (1971) evaluated the concepts of 'existence' and 'space' in architecture. Nold Egenter (1992) combines the essentialities of the



above two studies for the study of human dwelling units in the ‘architectural anthropological’ approach. But this approach is proposed as a grand scheme that completely rules out the formal and stylistic studies of the past. This revolutionary approach gives a new dimension to the role of architecture in the development of mankind but one is still skeptical about the complete overruling of the people’s view. For the approach to be truly bilevel, it is important to reevaluate the inductively collected data and formed hypotheses by comparing it with people’s views and beliefs. The concept of such a ‘Grand theory’ is also ruled out in the present, with increasing awareness of the multi disciplinary factors affecting the built form.

In the postmodern context, a number of methodologies are presented for the study of traditional environments. One of the most notable contemporary works on study of traditional environments is *Dwellings, Settlements and Tradition* (1989), edited by Nezar Alsayyad and Jean-Paul Bourdier, which discusses a number of disciplinary approaches for the study of traditional environments. Paul Oliver’s *Encyclopedia of Vernacular Architecture* (1997) also mentions the diverse methodologies for study of vernacular settlements. Focusing on the Indian context, *Paradigms of Indian Architecture* (1998) edited by Giles Tillotson, discusses the ways of interpreting the traditional architectural forms of India in the postmodern context. The above studies compile a number of methodologies for the study of traditional environments. At the same time, they also indicate the limitations of following one particular approach and show that a holistic and multidisciplinary balanced approach is essential to the subject and the context. Paul Oliver expresses the complexity of factors involving the study of traditional statements in the following statement:



The physical environment and the site, settlement pattern and orientation, location and spatial organization, social structure and family type, territory and inheritance, structural systems, preparation of materials, construction methods, skills and technologies are fundamental to building. But the cycle of the seasons, age and gender, concepts of public and private space, and the properties of behavioral norms can all be reflected in occupation and utility, while religion and belief, symbols and signification may be implicit in the use of space or explicit in detail and ornament.<sup>9</sup>

## 1.4 Methodological Framework for the Research

The study of traditional environments pose multiple issues related to the spatial, formal, climatic and socio-cultural factors. 'No study whose approach privileges either physical, formal, metaphysical or socio-cultural factors can account for the aesthetic, symbolic and polysemic richness of traditional dwellings and settlements.'<sup>10</sup> Indian architecture is not a systematic assimilation of plans and elevations but a living tradition. Sensitivity to the regional context and an inductive approach is essential to realize the intentions behind these traditional forms. The *havelis* of Rajasthan are an outcome of the complex social, religious and cultural factors as well as the skill of the local masons and their struggle with the available material. The definition of the term '*haveli*', itself indicates the limitations of following a singular approach favoring either physical or social factors. Along with accommodating the social structure of the noble's family - each *haveli* aspires to achieve a grand image, trying to compete with the palaces of the *maharajas* (kings). Thus, the form is a synthesis of social planning and formal characters. Considering the complexities of the context and the type, a multidisciplinary approach is essential for the research work.

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<sup>9</sup> Oliver, Paul. 1989 p.75

<sup>10</sup> Bourdier, Jean-Paul and Nezar Alsayyad. 1989 p.8



Selection of a singular approach is like selecting a single thread from a woven fabric when in reality, it is the complex matrix of varied threads that weaves the pattern. The methodological framework for the research aims at a balanced approach combining the formal, technological, anthropological and experiential dimensions related to the *havelis*. 'Typology of dwellings as an area of study needs to go beyond the customary formal organizational analysis to a broad context based examination of socio-economical, political, cultural, climatological, regulatory and technological determinants.'<sup>11</sup>

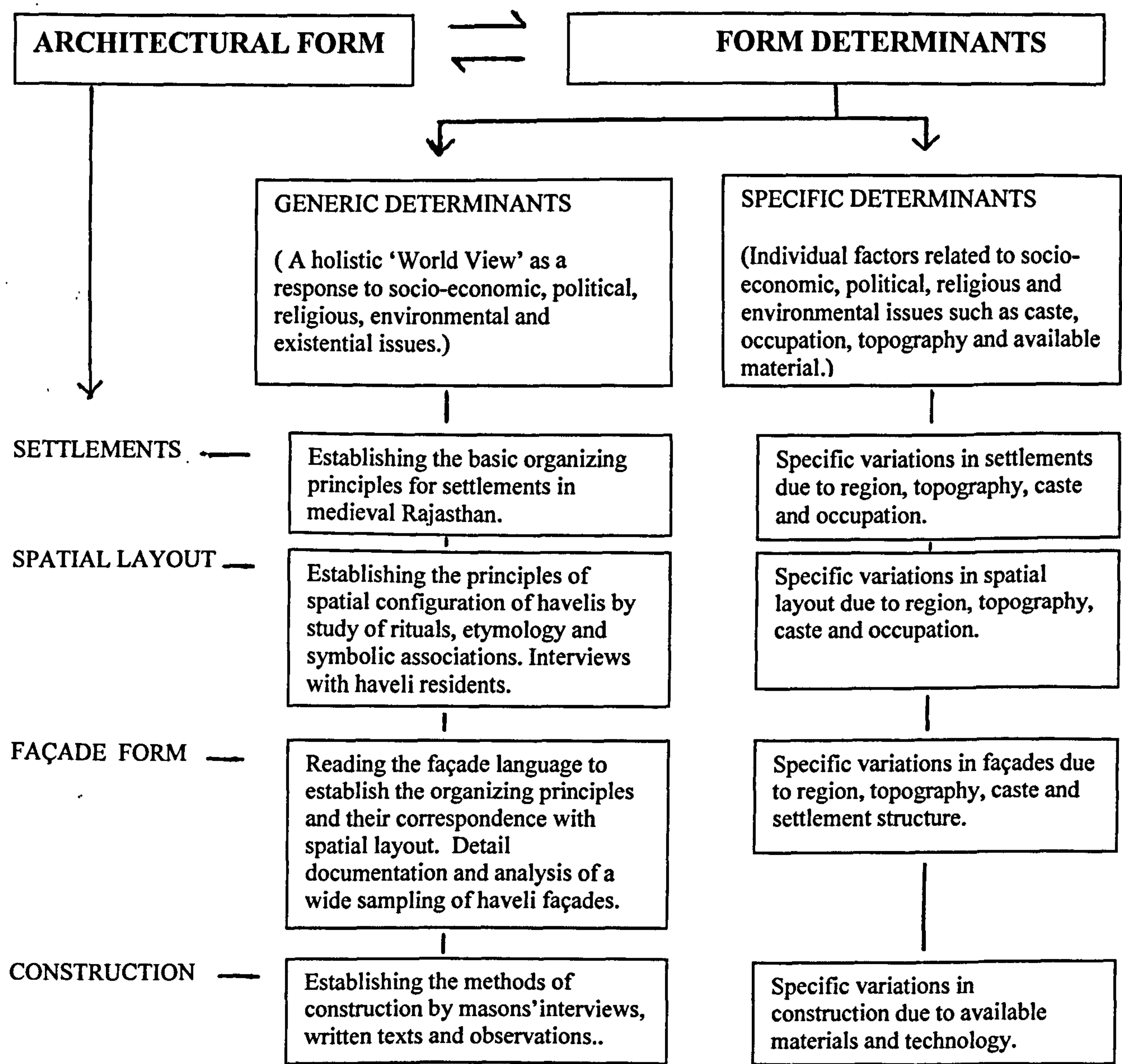
To accommodate all the above mentioned factors the research is done at two levels - one which considers the combined impact of all these factors in influencing the basic form and another which studies the specific impact of these factors individually on the form. The intention of the work is to study the archetype in Rajasthan from the generic principles to the specific variations. Hence, the methodology first identifies the generic and specific determinants of the form and studies them in context of their disciplinary fields. The generic determinant is identified as the 'world view' (a combined response to socio economic and environmental determinants) that determines the generic form. The form diversifies into a variety of expressions under the influence of specific determinants such as location, topography, caste, occupation and available materials and technology. The basic intention is to provide solutions to the following generic and specific inquiries – What determines the generic core of the *haveli* and how does it reflect in all aspects of the architectural form? And secondly, how do specific variations in the architectural form reflect in the spatial, formal and technological aspects that determine the sub regional identities within Rajasthan e.g. how does a Marwari *haveli* in Jaipur (Dundhar

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<sup>11</sup> Gami, Bharat. *IASTE. Working Paper Series*. Vol. 24., 1991 p.63



Region) differ from a Rajput *haveli* in Marwar or Mewar region? All aspects of the architectural form such as layout, spatial planning, façade composition and constructional details are studied at these two levels i.e. generic form and specific variations by identifying the generic and specific determinants and analyzing their impact on the form. The following method diagram explains the detailed methodology.



**Figure 1.6 – Method Diagram**



## Generic Determinants

The conception, realization and usage of a particular architectural form are rooted in an ideology or worldview. In this context, 'world view' indicates a way of life as a response to the social, economic, political, religious and environmental issues. Researchers such as Gunawan Tjahjono in *Dwellings, Settlements and Tradition* (1989), Egenter (1992), Anick Coudart (1994) have discussed the significance of 'world view' in influencing the dwelling form. This thesis assumes the traditional worldview of a place to be primarily responsible for the generic form of a dwelling.

The research establishes these generic principles by inquiring into the following aspects of the built form, a) spatial analysis with an anthropological angle using the study of rituals, religion, symbolism and etymological roots b) formal principles of composition in the existing architectural form, and c) principles used in the methods of construction. The research establishes the interdependency of the social ritual, the formal architectural (concretization) and the construction technology and their singular aims corresponding to the worldview.

a) The spaces inside the *havelis* and the cultic rituals during festivals are studied as important tools in understanding the spatial organization of the form. This research accepts the ritual foci as generators of space. Cultural Anthropology presupposes that rituals arise out of religious beliefs and myths. According to Egenter (1992) rituals are basic acts arising out of existential conditions, later on developing religious associations and symbolism. Rather than assuming



either one factor as the precedent, this research accepts the significance of both rituals and religious beliefs in determining the form and studies each factor and its impact on the form. Evidence from the ritual activities is further authenticated with etymological roots and modes of oral transmission like folklore, fables, proverbs etc. - thus supporting the physical observations with cultural values and symbolic associations. Etymology is used as a significant tool to understand the origin of generic forms. The research lays an emphasis on the understanding terms related to towns, clusters, *haveli* spaces, construction, names of places, names of owners, and phrases and sayings in the local language. It attempts to understand the rituals and observation in terms of the inhabitants' interpretation of the process (their interpretation) and of the traditions. It recognizes that the traditions and rituals are being followed as accepted social norms with the meaning often lost in vague spiritual beliefs. The research intends to establish the relation between the structure of traditions, the built form and the interpretation by the residents.

b) The formal principles of the built form are studied by an inquiry into the existing form. In consonance with Adam Hardy's (1995) theory about reading the grammar on the external wall, the formal linguistics of the *havelis* are documented by a detailed study of the exterior form. The rules of grammar are derived and the composition is analyzed in terms of the aedicular language.

c) The methods of constructing the *havelis* are reinforced with masons' interviews and parallel observations in the traditional texts and social structure. Etymology again serves as an important tool for understanding the terms related to construction.



## Specific determinants

Beyond the principles that determine the generic form, a number of factors determine the sub regional variations in the spatial, formal and technological vocabulary of the form. These are:

- a) External factors including the regional topography, city structure and economy: These determined the available size of the plot for the *haveli* and its location. Hence initial classification of the studied settlements is based on the topography and economic / political structure. This provides a preliminary regional categorization based on the landform.
- b) Social factors of caste and occupation: A typological framework using owner's caste and occupation is established. Impact of these factors in the spatial and formal aspects of the form is also studied.
- c) Factors such as city structure, caste, topography and available material that determine the variations in the *haveli* façades.
- d) Technological factors such as available materials and construction methods. Sub regional variations in the *haveli* spaces, façades and the methods of construction due to these factors are documented.

The above methodological juxtaposition reveals each aspect of the archetype in contrast and is essential for a comprehensive study of the form and its meaning. Overall, the work discusses the *havelis* as they were conceived, built, lived in and are perceived. The process is described using the designer's view (architect as well as owner), the product characteristics are studied in the form itself and the usage described in terms of the owner's viewpoint. In the research work, the primary source of information is the existing built form and interviews with the



residents and the masons. Three basic viewpoints considered in the research will be presented: that of the architect (masons' interviews) in the traditional context, of the occupant (user) in the traditional context and a formal inquiry in the present context.

## 1.5 Fieldwork and Selection of *Havelis*

The fieldwork began with an initial list of the *havelis* in Rajasthan that was prepared from the INTACH listings and corresponding research work done by Kulbhushan Jain (1986), Sunand Prasad (1987), Sarah Tillotson (1998), dissertation and thesis done by students of architecture in C.E.P.T at Ahmedabad, S.P.A. at New Delhi, M.R.E.C at Jaipur, Sushant School at Gurgaon and T.V.B. School of Habitat Studies at New Delhi. Small towns and unexplored places were visited to check the possibilities of finding *havelis* and a final list of *havelis* was made before commencing the fieldwork. The selection of the towns in each of the nine regions is based on the historic significance and the above listings of the *havelis* (Figure 1.5). The old capitals of Rajwara are selected to study the origin of the form and the new capitals of the state, to study the development of the original form. A few *havelis* are studied from smaller surrounding towns to get a comprehensive view of each region. The selection of towns is related to the political significance of the towns. It includes a) Capital cities like Dausa, Amber, Jaipur, Tonk, Rajgarh and Alwar, and b) Smaller *thikanas* like Sanganer, Samode, Chomu, Uniara and Malpura. It is obvious that the capital towns were more significant with more nobles staying in the capital cities and hence these towns have grander *havelis* with more variations as compared to the ones found in the smaller *thikanas*. Five to eight *havelis* are visited in the capital towns and one or two *havelis* in the smaller surrounding



towns. In total about 150 *havelis* are visited and photographed in 40 towns of the nine regions of Rajasthan. Around ten *havelis* are studied, in different towns, for each region except for the Vagad region and Godwad region, which have very few existing *havelis*. The selection of *havelis* within the walled city of each town is based on its location and period of construction and on the social status and caste of the original owner with the intention of getting maximum variation in the samples. The survey is carried in the time period of three years. In most towns, the *havelis* are located within the walled city. Sketch plans and elevations of around eighty *havelis* are made. A few boundary areas in Gujarat (Surat, Ahemdabad, Sidhpur, Unjha) and Haryana (Gurgaon, Pataudi) are also covered in the fieldwork. Remaining information is based on archival data. A detailed gazetteer of the *havelis* is attached at the end of the research in Appendix - A.

The fieldwork is conducted in two phases. The first phase involved taking photographs, basic dimensions, drawing sketch plans and elevations and interviews with the residents. The second phase consisted of conducting interviews with the masons and more residents. Architectural data is gathered by measurements, observations and photographic images. In a few cases, the masons still bound to traditional practices are also interviewed. The socio-cultural data is gathered through interviews of residents and literary sources. Interviews are conducted with residents of fifty *havelis* and about 5-6 masons from different regions of Rajasthan. The research started with a specific format of interviews with the residents of the *havelis* and the traditional masons (Appendix - D). But, after a few attempts it was realized that following a rigid format is difficult. The information collected through interviews is prone to individual bias and influenced by the cultural tradition of weaving stories. Also, in most cases, the original owners are not residing in the *haveli* and it is difficult



to get authentic information. Hence, this data is further supported by facts from literary works of a particular period and observations of the built form itself. Literary sources provide significant information related to the cultic rituals and festivals, etymological understanding of selected words related to places, and fables and sayings in local language. Interpretation of relevant regional texts like *Rajvallabha* (15<sup>th</sup> century text in *Devnagri* script) is also included. Observations related to the built form document the materials used, type of construction, resulting form, types of spaces etc. A basic format for gathering information about the *havelis* is also attached in the Appendix –D.

Basic Data was collected in the following form:

- a) Built form: measurements, sketch plans drawn on site (or in a few cases obtained from the owner), sketches, elevations and photographs.
- b) Residents' interviews: owner's history, ritual observations, usage of space by different castes and daily activities in the *haveli*.
- c) Masons' interviews: material and composition, formal principles and rituals followed in construction.
- d) Archival Data: gazetteers for historical data, fiction for social data and *vastu* text of medieval period for construction details.

## 1.6 Mode of Presentation

Chapters are sequentially linked and yet independent of each other in methodology and subject. Beginning from a broader urban context the research narrows down on the typology of the form and the spatial characteristics of *havelis*, and then zooms back into the broader context relating to the boundary areas. The initial chapters describe the basic principles and the regional setting.



The central chapters (four, five and six) focus on the spatial form and meaning, the principles for the composition of façade and the methods of construction. Each of the central chapter has an end section that describes the generic principles and mentions the sub regional variations in the form. The format of chapters is as follows:

The next chapter i.e. chapter two is a visual chapter that introduces the reader to the *haveli* form. It is an experiential journey through a few *havelis* in different regions of Rajasthan. It documents the perceptual experiences and unravels the *haveli* form from a viewer's perspective.

Chapter three discusses the ideologies and worldview that determine the generic form of medieval settlements in Rajasthan. It first classifies the medieval towns of Rajasthan and then categorizes the *havelis* using social factors of caste and occupation.

Chapter four is an anthropological inquiry into the *haveli* spaces using rituals, etymology and symbolic associations. It describes the evolutionary development of *haveli* spaces and establishes the sub regional variations in the *haveli* plan.

Chapter five interprets the formal language of the *haveli* façades in terms of aedicular compositions. It identifies the evolutionary pattern of *haveli* façades and establishes the sub regional identities in the façades. In the course of this analysis, it also suggests a template that can be used to study the *haveli* façades and arrive at an appropriate plan.



Chapter six inspects the technological factors that have an impact on the *haveli* form. It describes the rules mentioned in the traditional text *Rajvallabha* and compares them with field observations and masons' interviews. Thus it derives the rules of grammar that were possibly followed in the construction of the *havelis*. It also describes the sub regional variations observed in construction methods and materials.

Chapter seven is an overview of the sub regional variations in the *haveli* form of Rajasthan. It also compares the *havelis* in different regions of Rajasthan with *havelis* in the corresponding border states.

The concluding chapter outlines the achievements of the research relating to the generic principles of the form and the sub regional variations. It also provides suggestions for future work.

The collected data is presented in the following format:

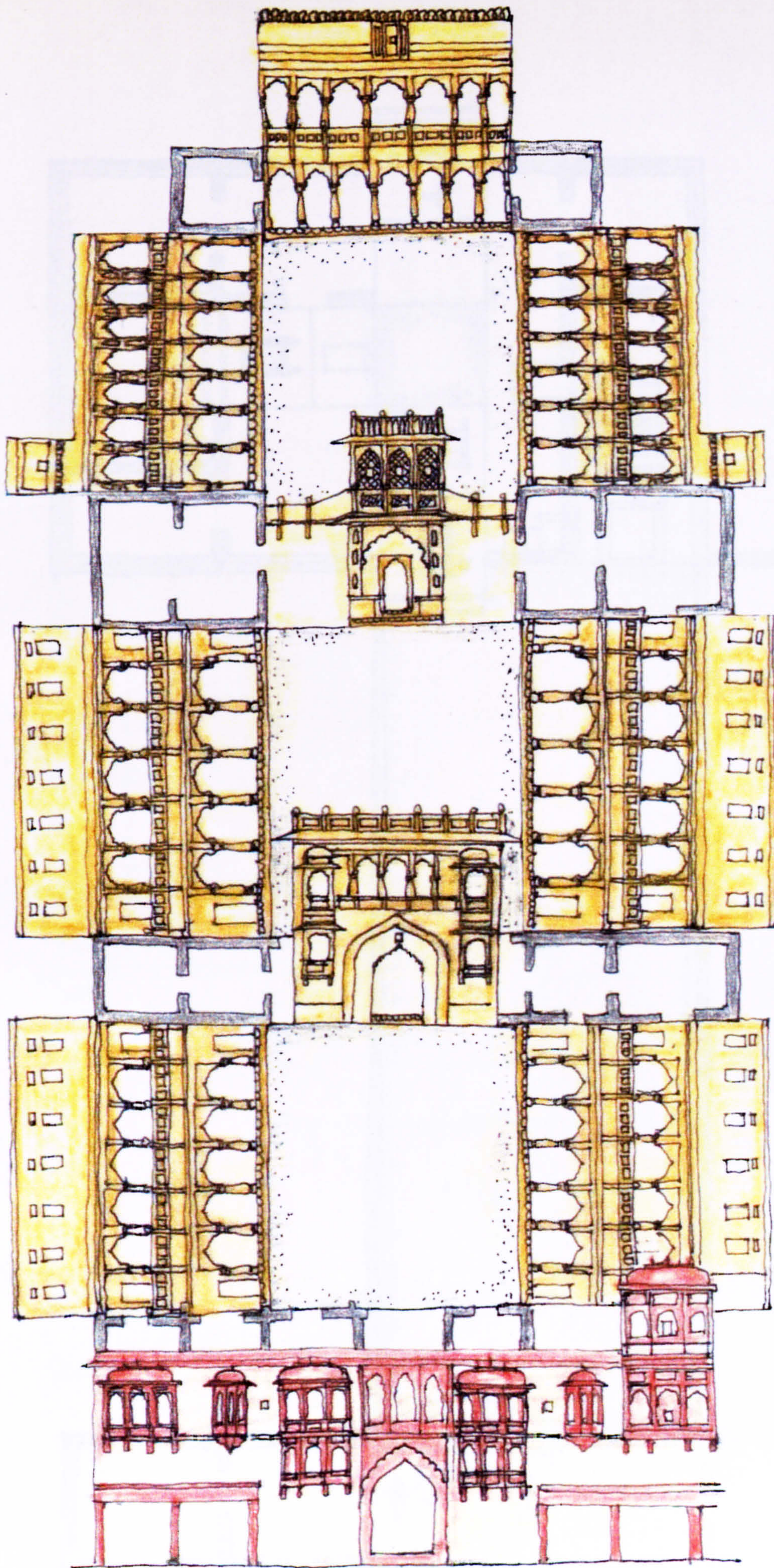
- a) Basic information through architectural drawings (plans, elevations and details) and photographs. All dimensions are in feet and inches. The sub regional variations are arranged in alphabetical order.
- b) Analytical data in schematic and conceptual diagrams.
- c) Overall view and experience as composition of spatial experiences through the multiple point method used in Rajput paintings.



## 2 Experiencing the *Havelis*

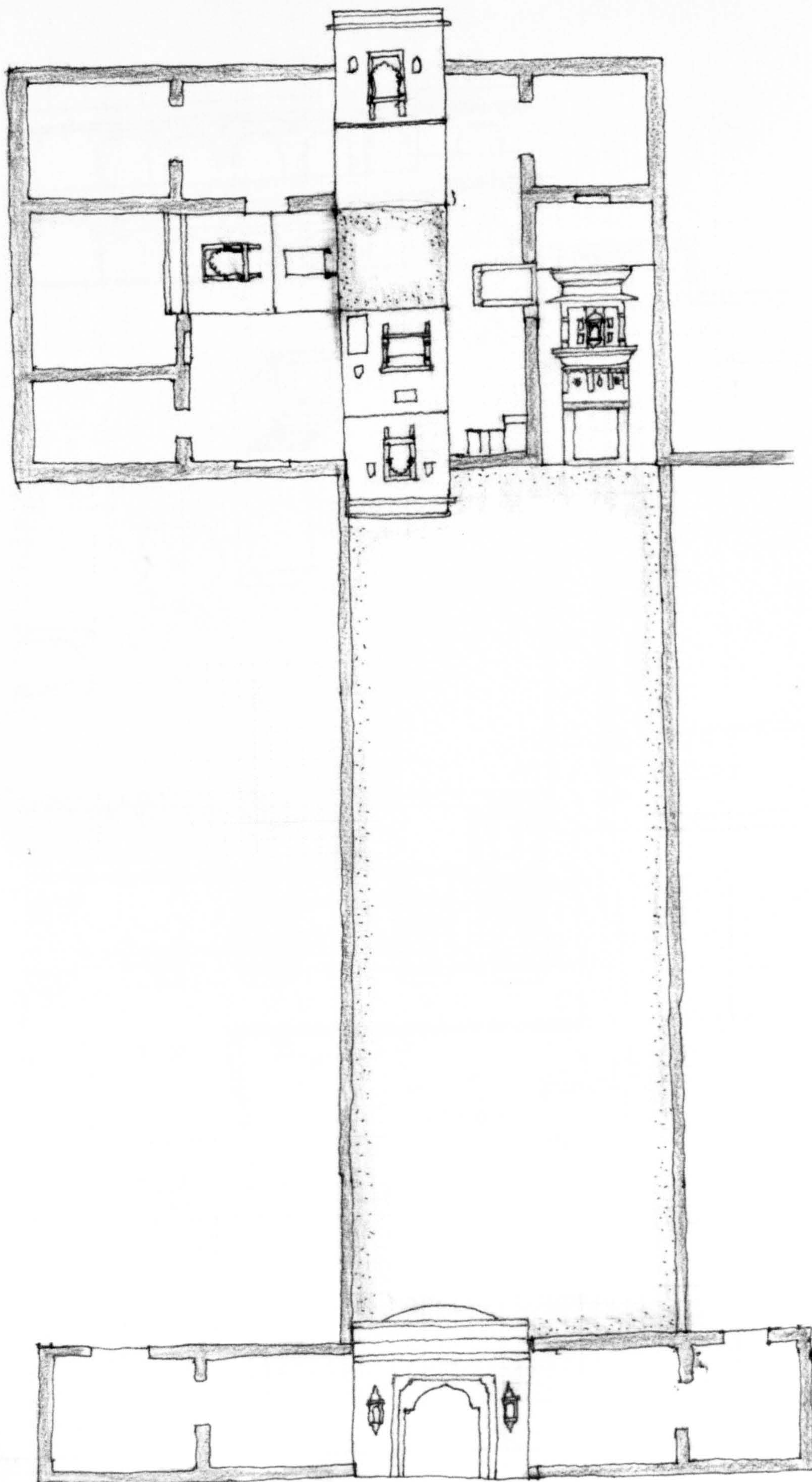
This is an introductory and purely visual chapter that familiarizes the reader with the *haveli* form. It includes two-dimensional representations of *havelis* from different regions of Rajasthan in a manner similar to the Rajput paintings, combining architectural plans and elevations. The sequence of representations is related to the perceptual experiences of the viewer. The viewer moves from the entrance (usually located at the bottom of the page except in Figure 2.3 where the entrance is on one side and Figure 2.7 where the *haveli* faces Lake Pichola with the entrance on the opposite side) into the courtyards. The elevations are presented as the viewer experiences them. It shows the journey from the access point into the *haveli* to the *haveli* centre in the inner court. All the entrances and court façades are shown in elevation and courtyard space is shown in plan form indicating that this is the primary space in the *havelis*. The presentation is deliberately interactive so that the reader can relate to the *haveli* form of Rajasthan.





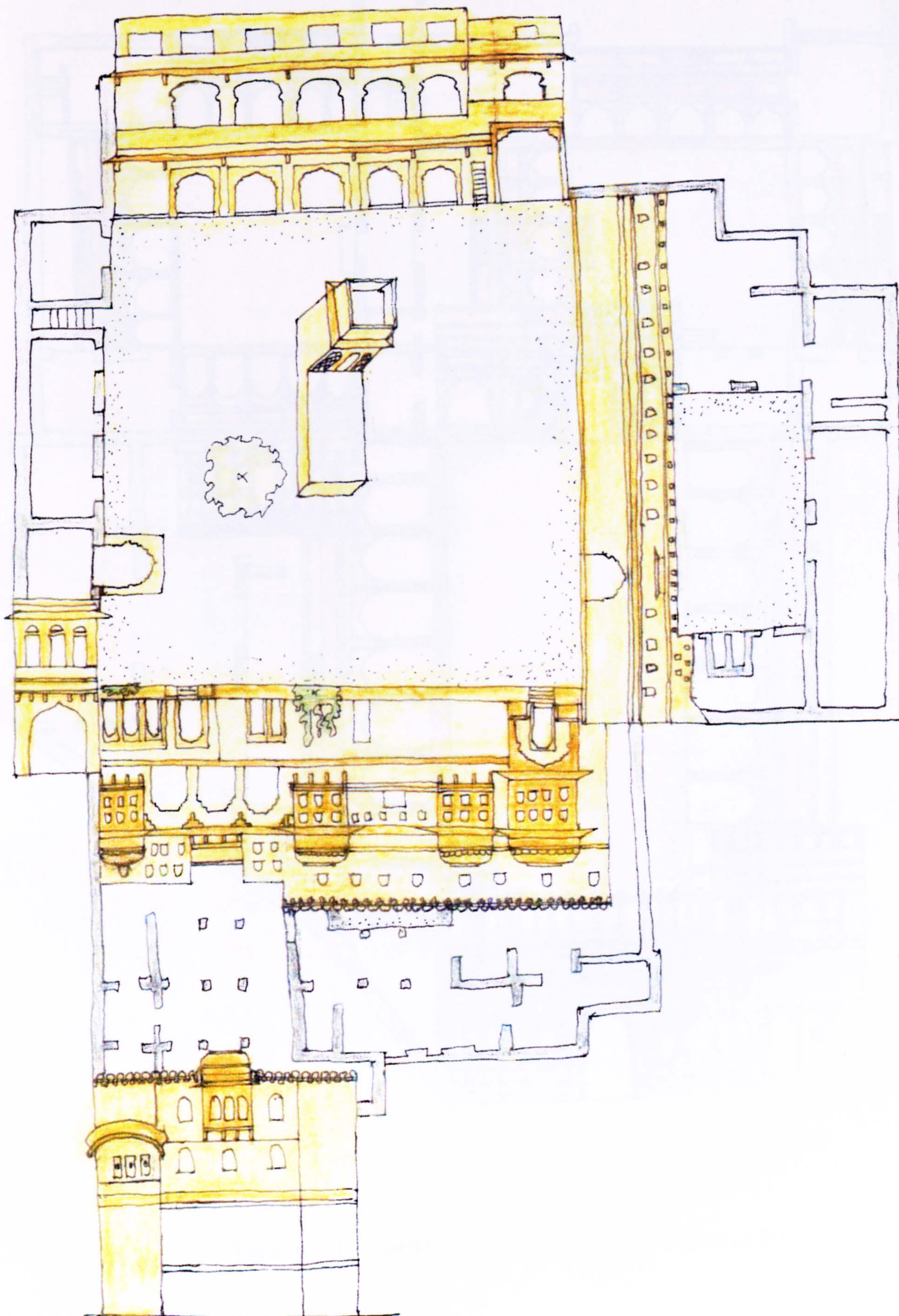
**Figure 2.1 - Natani Haveli, Jaipur, Dundhar Region**





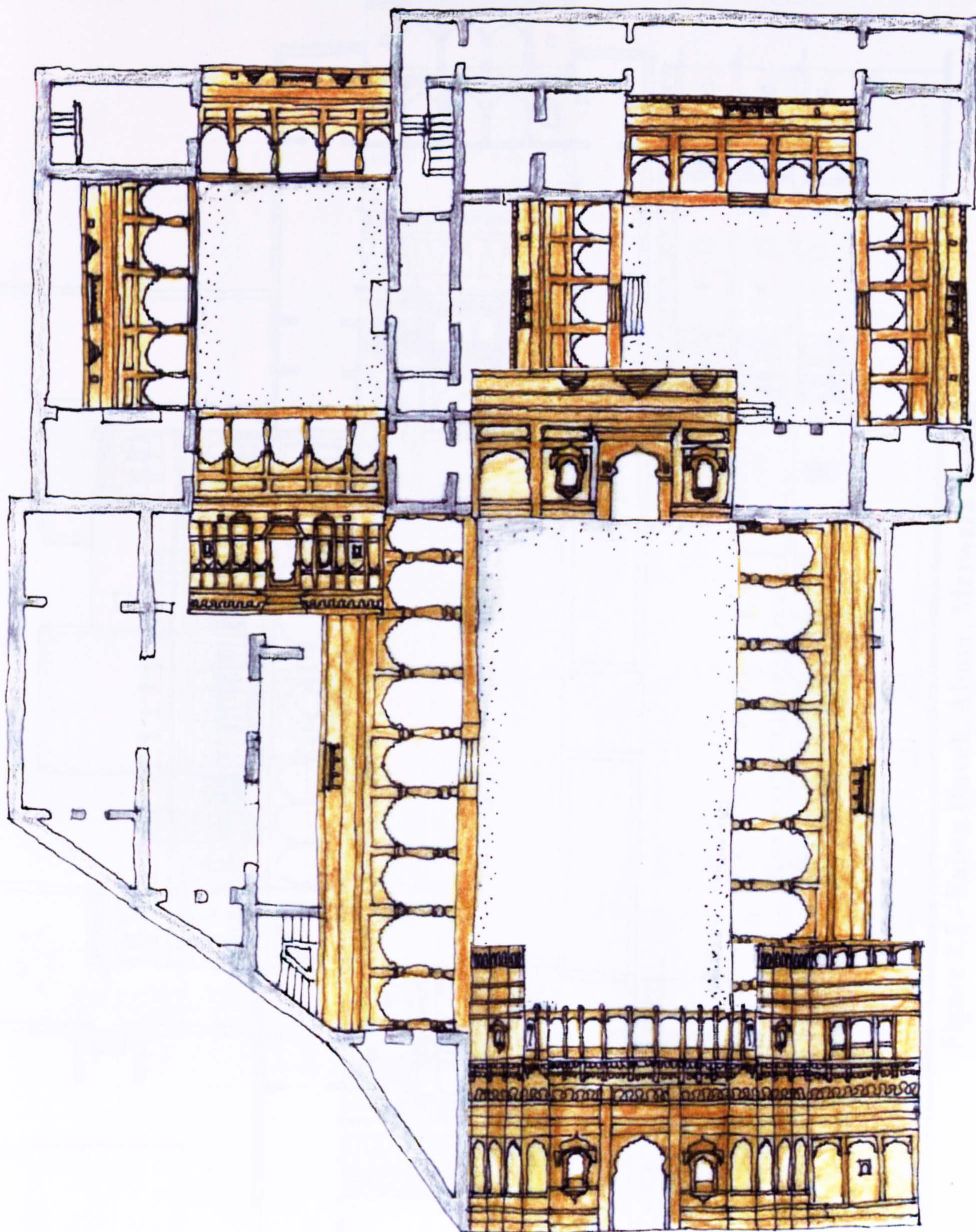
**Figure 2.2 - Singhion Ki Haveli, Sirohi, Godwad Region**





**Figure 2.3 - Bhawani Singh Haveli, Bundi, Hadoti Region**





**Figure 2.4 - Nachna Haveli, Jaisalmer, Marwar Region**



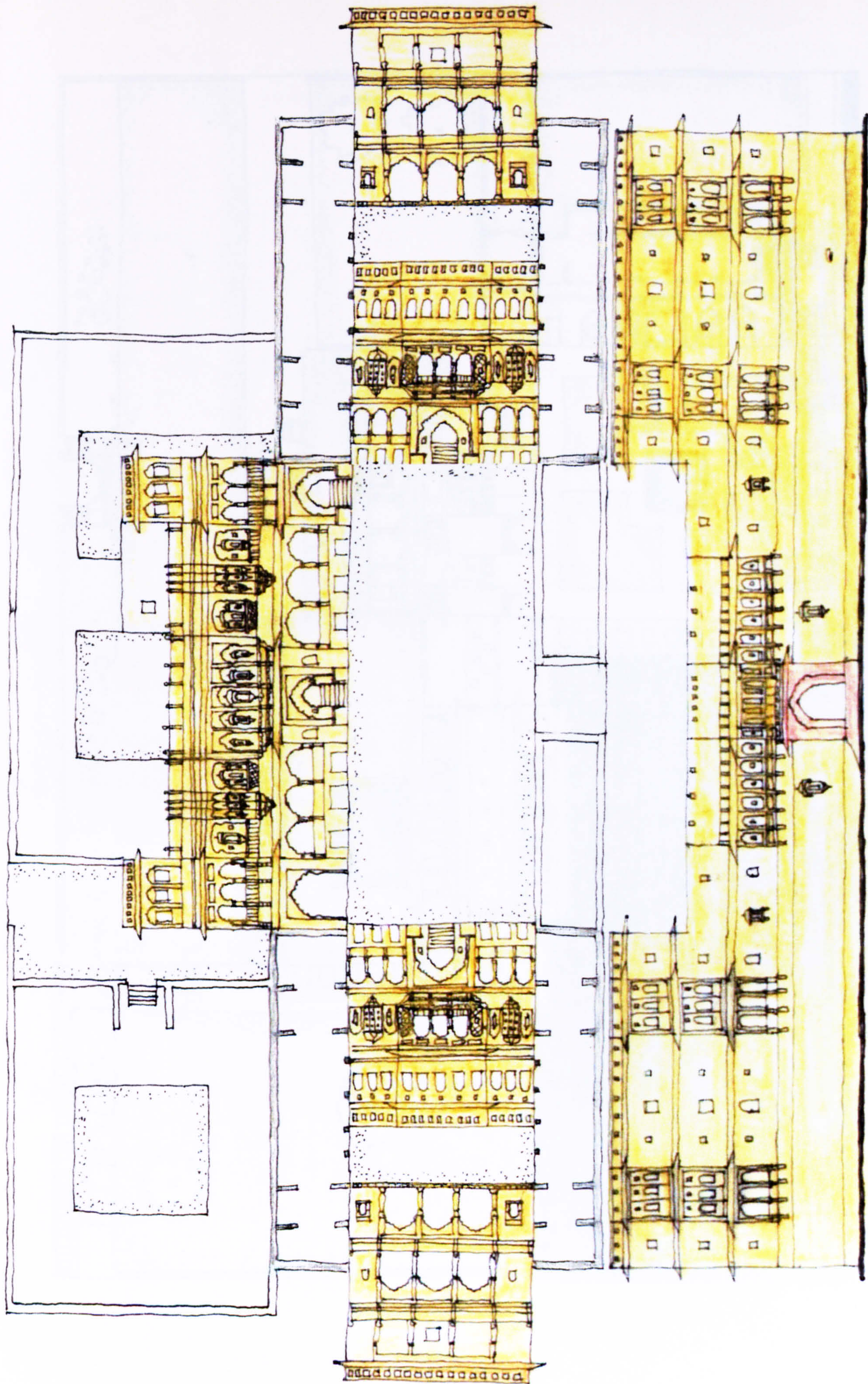


Figure 2.5 - Patwa Haveli, Ajmer, Merwara Region



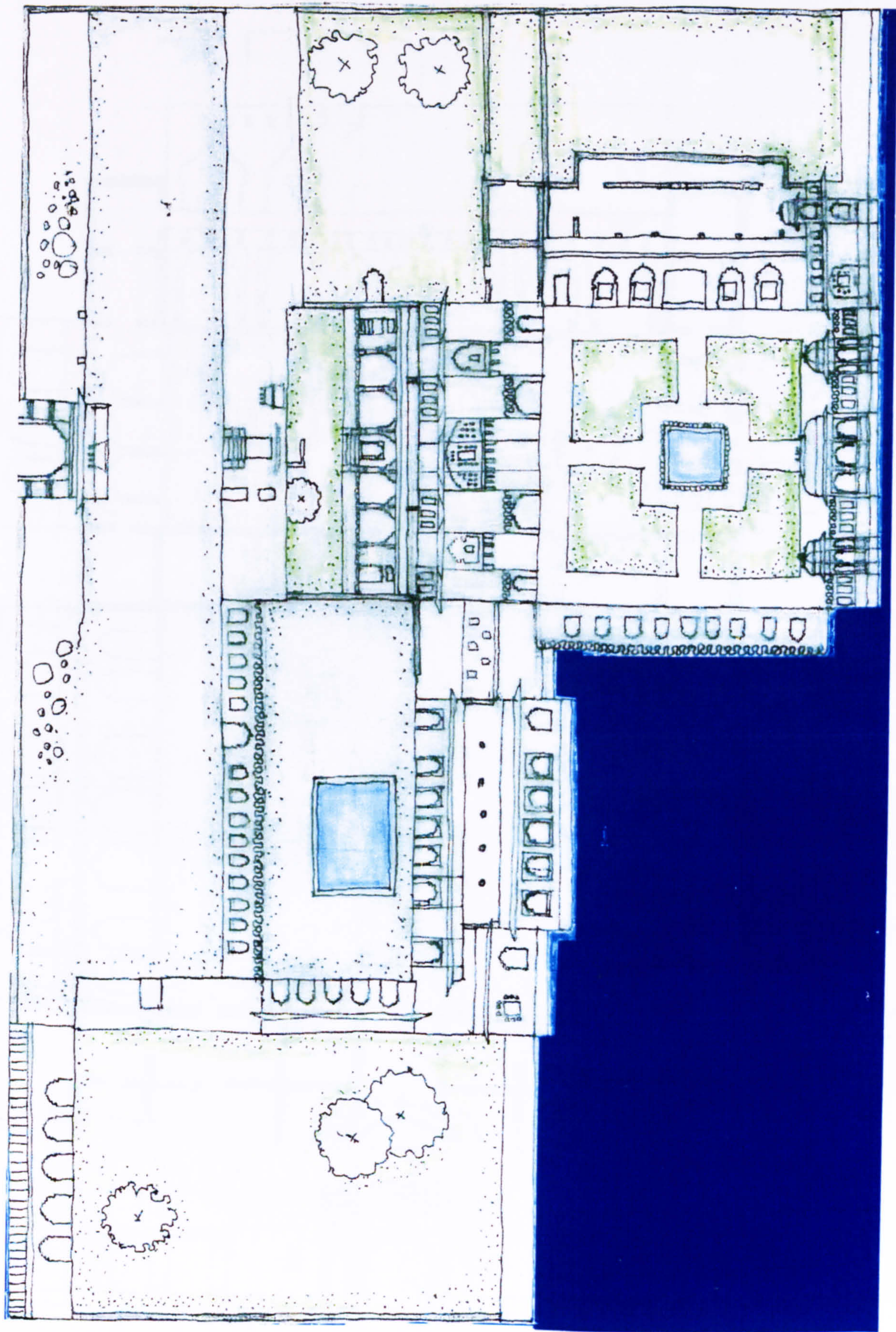
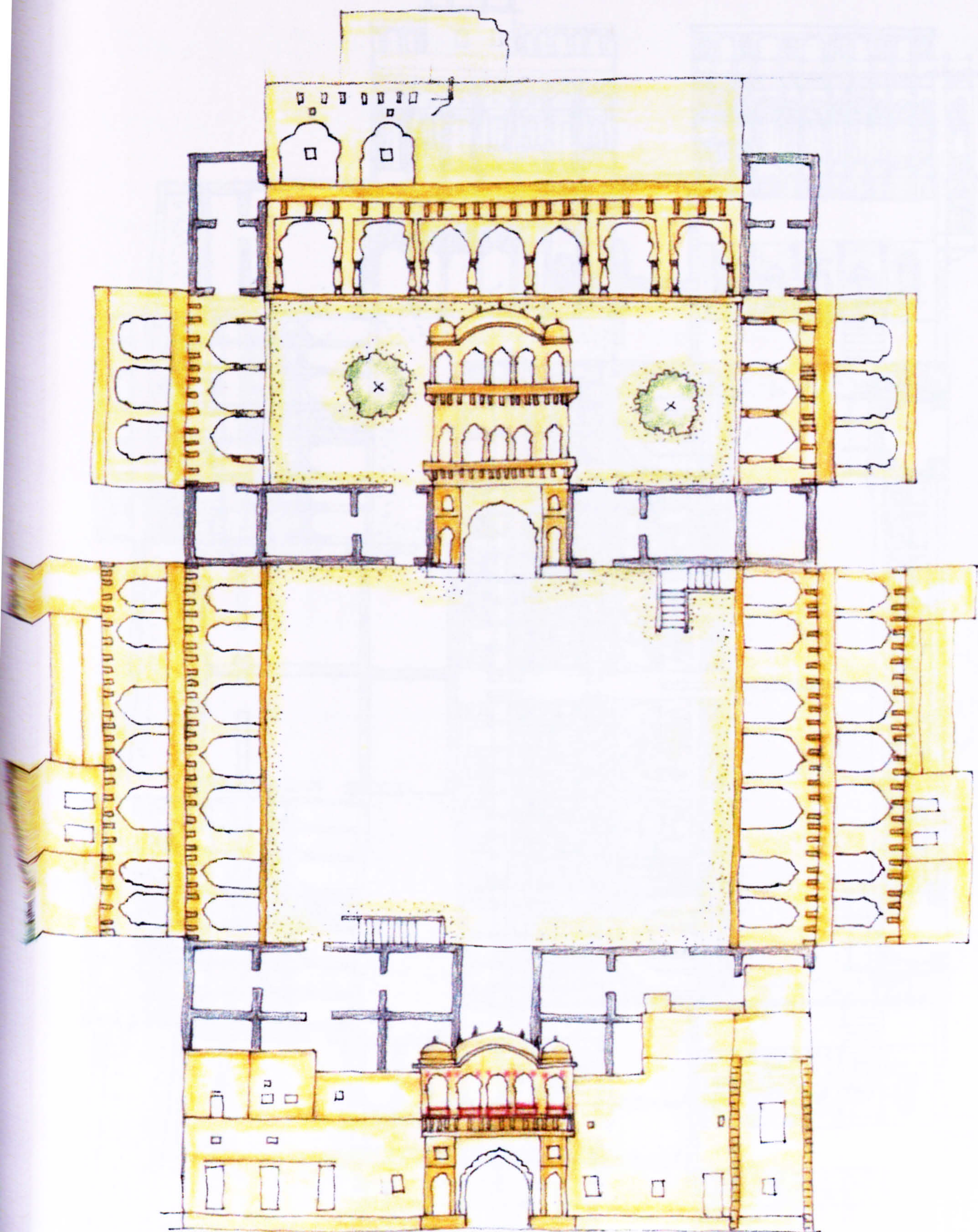


Figure 2.6 -Amet Haveli, Udaipur, Mewar Region





**Figure 2.7 - Lakshmi Santhan Haveli, Mewat -Brij Region**



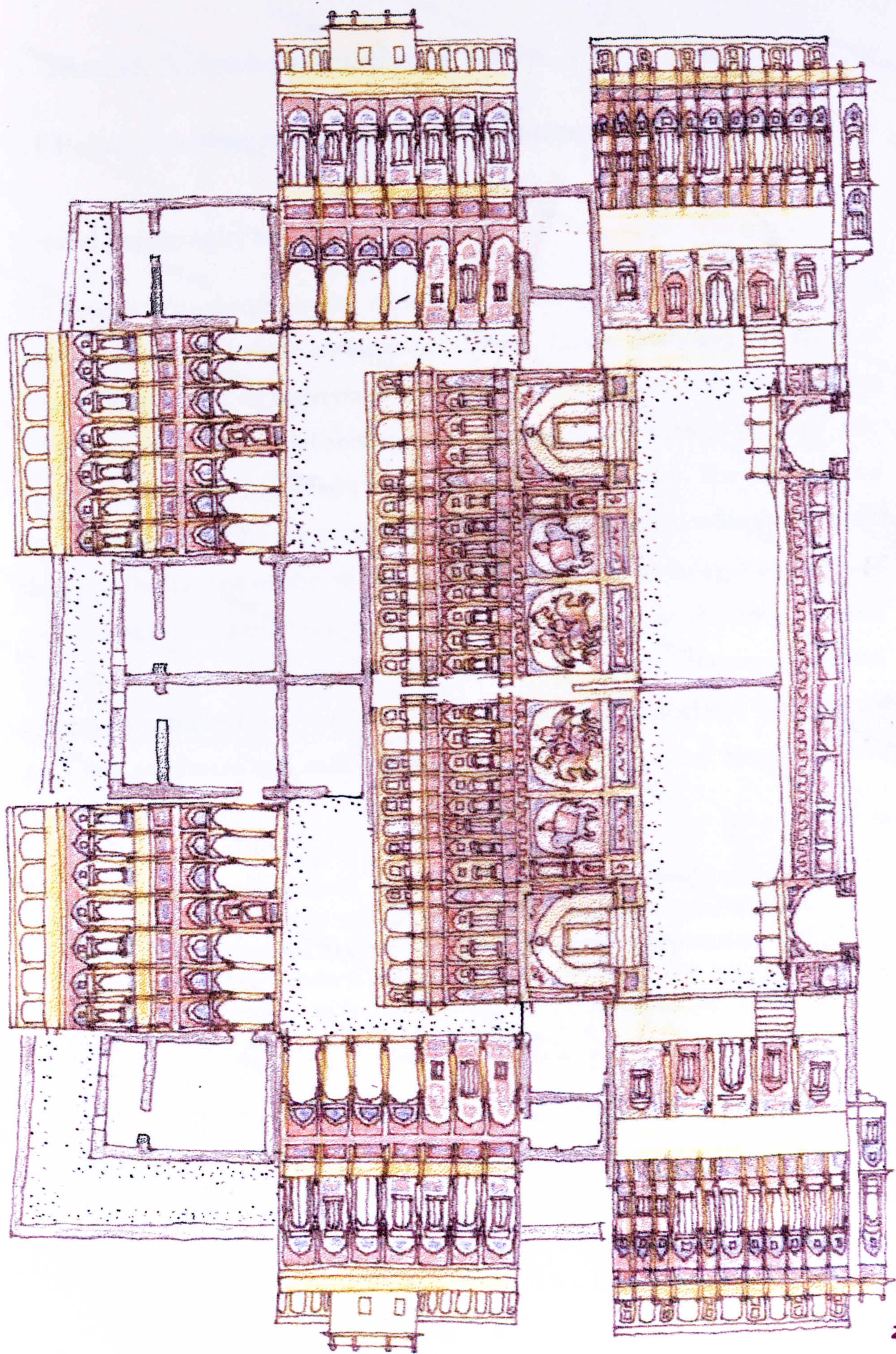


Figure 2.8 - Goenka Haveli, Mandawa, Shekhawati Region



### 3 *Haveli*, Neighbourhood and Town

#### 3.1 Principles determining settlement patterns and dwellings

##### Nature, Topography and Concept of Time

The human settlements in any region are primarily as a response to natural forces and the immediate environment. Hence, before analyzing the physical form it is important to understand the basic comprehension of the surrounding environments by these inhabitants that structured all aspects of their life. Traditionally, social life was in complete rhythm with nature. The festivals and the rituals followed by the people of this region were bound with the seasonal changes. The earliest medieval towns of Rajasthan indicate an agriculture based society and the fairs and festivals like *Holi*, *Diwali*, *Gangaur*, *Basant Panchami*, *Teej* etc were associated with sowing and harvesting time of crops. Later on, these festivals also became part of the religious rituals associated with various gods and goddesses and each community or caste interpreted them with their local myths.

Rajputs were accustomed to a traditional Indian world-view of temporal reality as only a small part of universe with infinite time-cycles. What appeared to them were the notion of timelessness, and of enduring links between the present and the past. The notion of history was bardic, with no inclination to separate facts from legends, or historic present from mythic past.<sup>1</sup>

Indian time is structured in polar relations with each month constituting of the full moon phase (15 days) and the moonless phase (15 days) (*shukla paksha* and

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<sup>1</sup> Desai, Vishakha .in *The Idea of Rajasthan*.Vol.1, 1994, p.321



*krishna paksha* make one month or *masa*). The sun and moon are the royal couple – they create the day, night, fortnight, month, seasons and year. All festivals are related to the phases of moon and the life of a man in the medieval times, revolved around this time cycle.

Looking at the etymological origin of the four cardinal directions that are related to the cycle of the sun - *Poorva* (East), *Pashchim* (West), *Uttar* (North) and *Dakshina* (South) can explain this basic comprehension of nature. The basic marking was done with man facing the rising sun (Figure 3.1). Man and earth are located at the centre. *Poorva* or East is the primary direction as the sun rises from this direction. *Poorva* also means ‘before’, ‘first’ or ‘primary’. In all the ancient and medieval maps of Rajasthan region, East is always at the top. *Pashchim* means ‘last’ related to the direction where the sun sets. In the beginning of any ritual like the making of the *yajna* altar, it was the East-West axis that was marked first by looking at the shadow of a stick. Thus, if the man stands facing the rising sun, the right side is *Dakshin* which literally means ‘to the right’. And *Uttar* meaning ‘next beginning’ or the beginning of the next cycle of sun. The natural sources like the river, sea, forests and mountains were also structured in a similar manner. The *Uttar –Dakshin* (North-South axis) took care of the topographical variation with earth in the centre, water on the lower North end and mountains on the higher southern end. The five elements were assigned the respective directions with earth in the centre. The mountains as high and inaccessible formed the centre of most settlements. The water bodies low and inviting marked the entry of the settlements. Nature was the only source of information and regional topography determined the form of any settlement.



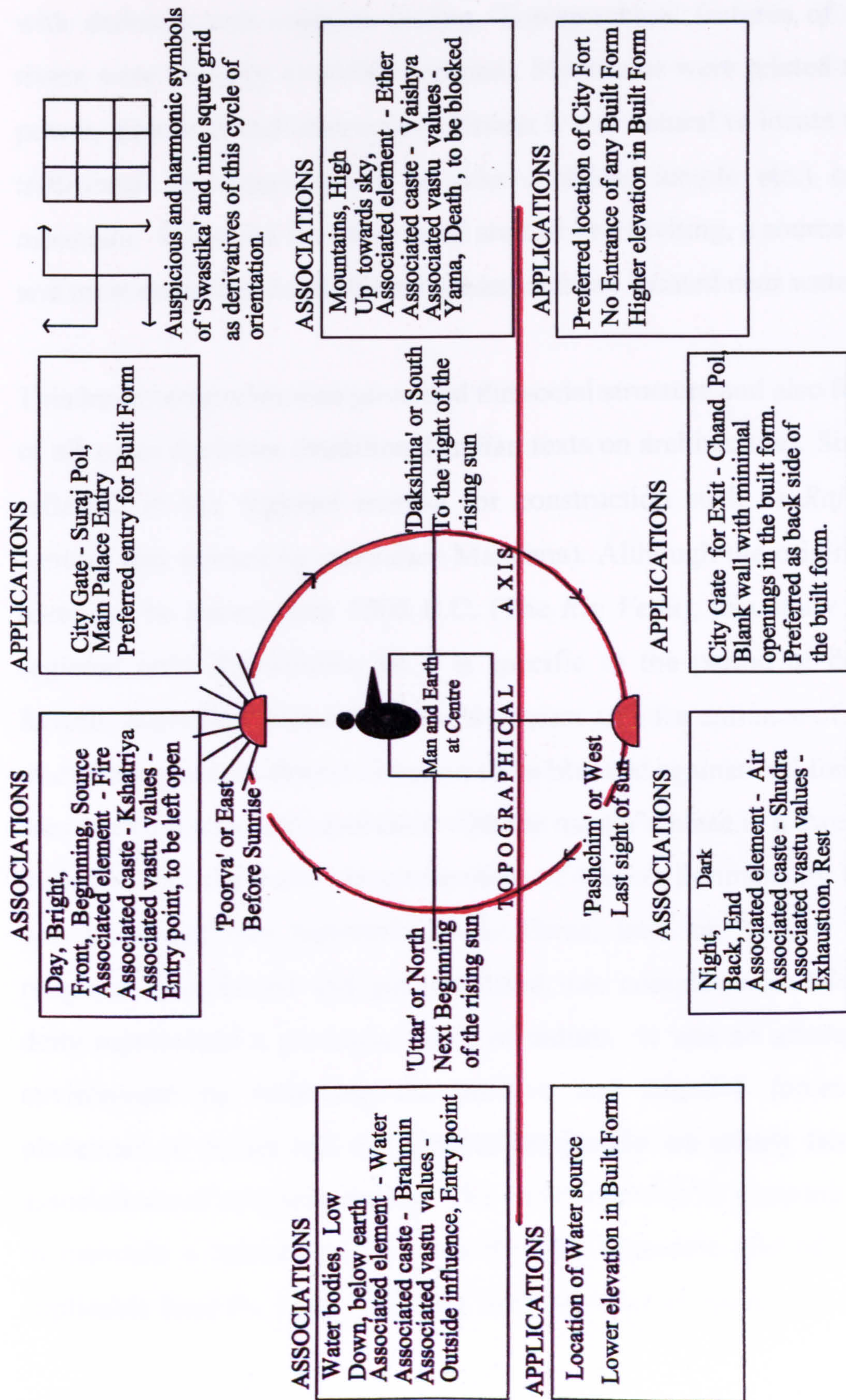


Figure 3.1 - Schematic diagram of the comprehension of nature and topography and its interpretation in determining the social structure and vastu norms in Indian society.



The Sun rises in the East, hence this direction was associated with the source of life, light, good omen and since it sets in the West; this direction was associated with darkness and negative feeling. Topographical features of mountain and rivers were the only available compass. Mountains were related to a feeling of power, giantness and obstruction. Hence, it was natural to locate the centre of a traditional settlement (chief or ruler's abode, temple etc.) on top of the mountain. Rivers on the other hand are low and inviting, a source of life (water) and most entrances to traditional settlements are located near water bodies.

This basic comprehension governed the social structure and also formed the core of all *vastu* doctrines (traditional Indian texts on architecture). Similar ideas are reflected in the regional treatise for construction such as *Rajvallabha* (15<sup>th</sup> century text written by *sutradhar* Mandana). Although the origin of such *vastu* texts can be traced from 1500 B.C. (The *Rig Veda*); this study deals with the regional texts *Rajvallabha* as it is specific to the period of development of *havelis*. *Rajvallabha* identifies the Northeast area for entrance of any settlement or dwelling and southwest direction to be blocked against evil forces. Southwest area is also higher and associated with the master's place in a dwelling unit. This indicates that the basic comprehension of the environment by the inhabitants was translated into harmonic grids. These, later on became complex with religious associations and got translated into complex *mandalas* where, each deity represented a particular force of nature. It was an attempt to order the environment by balancing the positive and negative forces of life. The placement of deities and the myth of the *purusa* are clearly later accumulated associations of religious rituals. The basic intention in planning the house was to maintain a balance of this polarity. The harmonic grid of nine squares is applicable from the level of the city to the level of an opening in a dwelling unit.



It is more relevant as a cognitive form used for formal organization cross-culturally (also found in Islamic, Javanese and Bali dwellings and even in European churches). The associative act reveals a process by which the actual is translated into the conceptual and then experienced as reality.<sup>2</sup>

This interpretation also explains the harmonic grids such as the '*Swastika*' and the nine square grid that are essential representations in all social and religious rituals of the Hindus. Clearly, these simple interpretations of natural forms and cycles of day and night got translated into traditional texts and governed the lifestyle of traditional inhabitants. Another aspect that influenced the layout of traditional dwellings is polarity or duality i.e. comprehending any aspect of nature, society or even the built form in two portions that balance each other and create a harmonious environment. Polarity of nature in the Indian society was clearly demarcated as Sun/Moon, Day/ Night, Water/Mountains, Low/High etc.

## **Social Structure**

This polarity of nature was also reflected in the social structure with the Sun and Moon representing male and female in the society. The caste structure and occupation was organized in a similar manner (Figure 3.1). This polar and harmonious relation was again reflected in the built form. Each dwelling had a balance of the male and female activities. The women folk were unaware of the outside world and the men folk were equally unaware of the happenings inside the *haveli*. The management of the food grains, production of various spices, pickles, eatables and control of the servants was totally in the hands of the female members. All the religious rituals were always carried in the inside;

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<sup>2</sup>Tjahjono, Gunawan in *Dwellings, Settlements and Tradition*, 1989, p.228



female domain of the *haveli* and only specific male members of the family would participate. No ritual was complete without the presence of the male and the female head. The two polar concepts of man as a dweller and a wanderer were expressed with females as centric and male members as eccentric. The activities of men outside were balanced by equal and polar activities of the women inside. These aspects also become evident in *haveli* layouts with *mardana* and *zenana* sections housed on separate floors or separate courtyards. The polarity of lord and servant was also evident with the *haveli* owner housed in the inner court and servants located in a lower court or outer areas of the *havelis*. Construction details such as the *nar-mada* (male –female) stone joint, and the use of double doors even in the smallest size of opening also reflect the ideas of balance and polarity incorporated in the built form.

The ideas of centre and polarity, obvious in the basic Indian philosophy also reflect in the social division of society and govern the spatial organization of any traditional dwelling. The whole landscape is structured according to this model. This simple worldview forms guidelines for organizing space from the scale of the house to the scale of the village and town. Hence, similar relations between human kind and nature are reflected at the scale of town, cluster and the dwelling unit. In each case, the spatial structure revolves around a centre or *axis mundi* that serves as the reference point. It is observed in the settlements with the superposition of the physical centre, political centre and religious centre. In social structure the centre is represented by the ruler at town level, influential aristocrat at cluster level and the master of the house in the *haveli*.



## 3.2 Medieval Settlement Patterns in Rajasthan

### Generic Form and Typology

The above mentioned principles are evident in the medieval townscapes of Rajasthan. Lynch's (1989) description of the basic form concepts for the cosmic model of Indian cities is clearly reflected in these towns of Rajasthan. These form concepts are:

Axial line of procession and approach, the encircling enclosure and its protected gates; the dominance of up versus down, or big versus small; the sacred centre; the diverse meanings of cardinal directions, due to their relations to the sun and the seasons (the north is cold and south warm; the east is birth and beginning, the west is death and decline); the regular grid for establishing a pervasive order; the device of organization by hierarchy; bilateral symmetry as an expression of polarity and dualism; landmarks at strategic points as a way of visibly controlling large territories; the sacred nature of mountains, caves and water.<sup>3</sup>

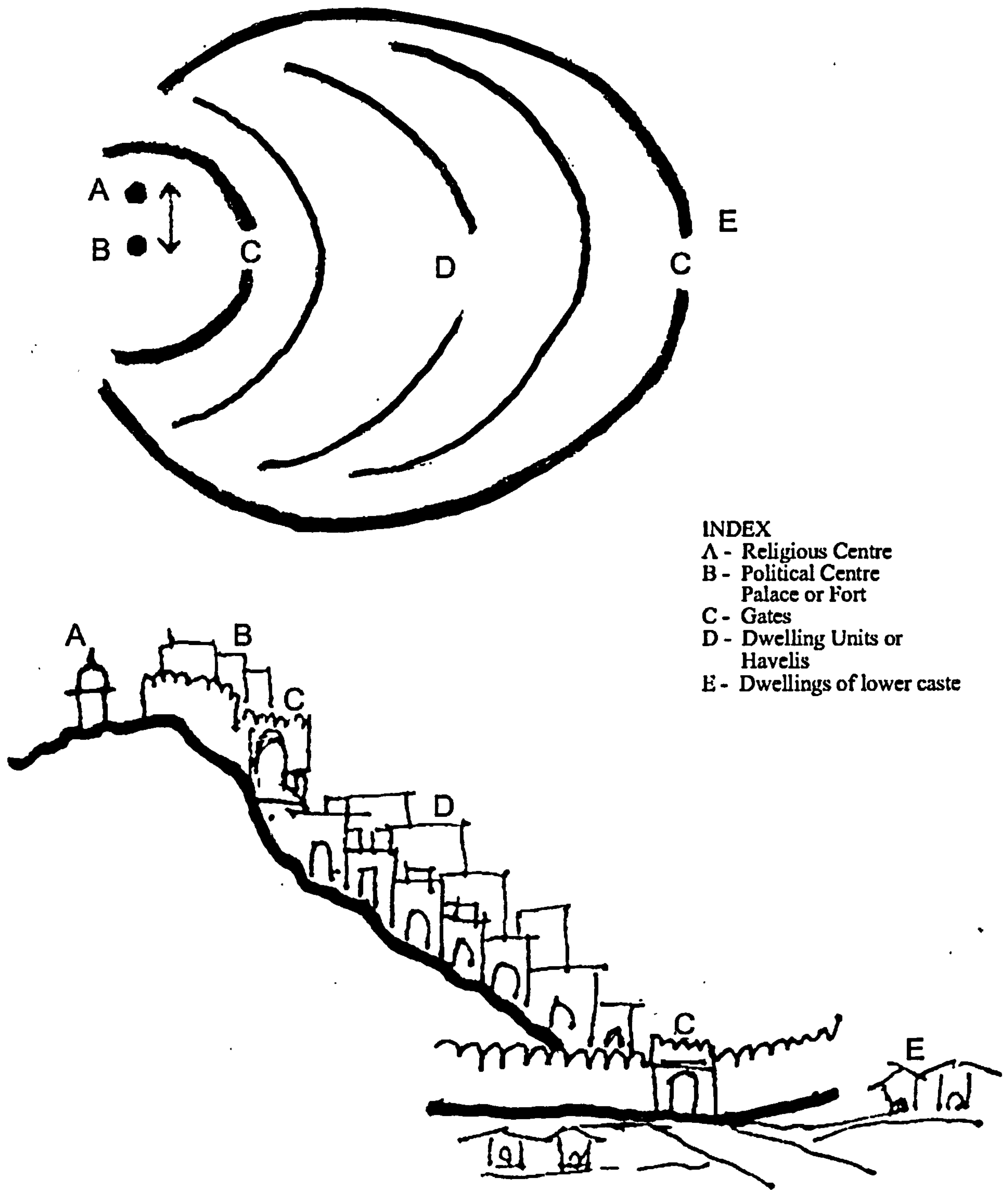
Lynch further acknowledges that, these characteristics of the traditional Indian city form such as axes, grids, enclosures, centres and polarities are a response to the cognitive principles, essential for surviving in the world.

A study of several settlements of the medieval towns of Rajasthan reflects the above mentioned principles of territoriality. The settlement structure of these towns was typical of the fortified cities: concentric development in response to the topographical variations with the centre or the most powerful dwelling at the highest point.

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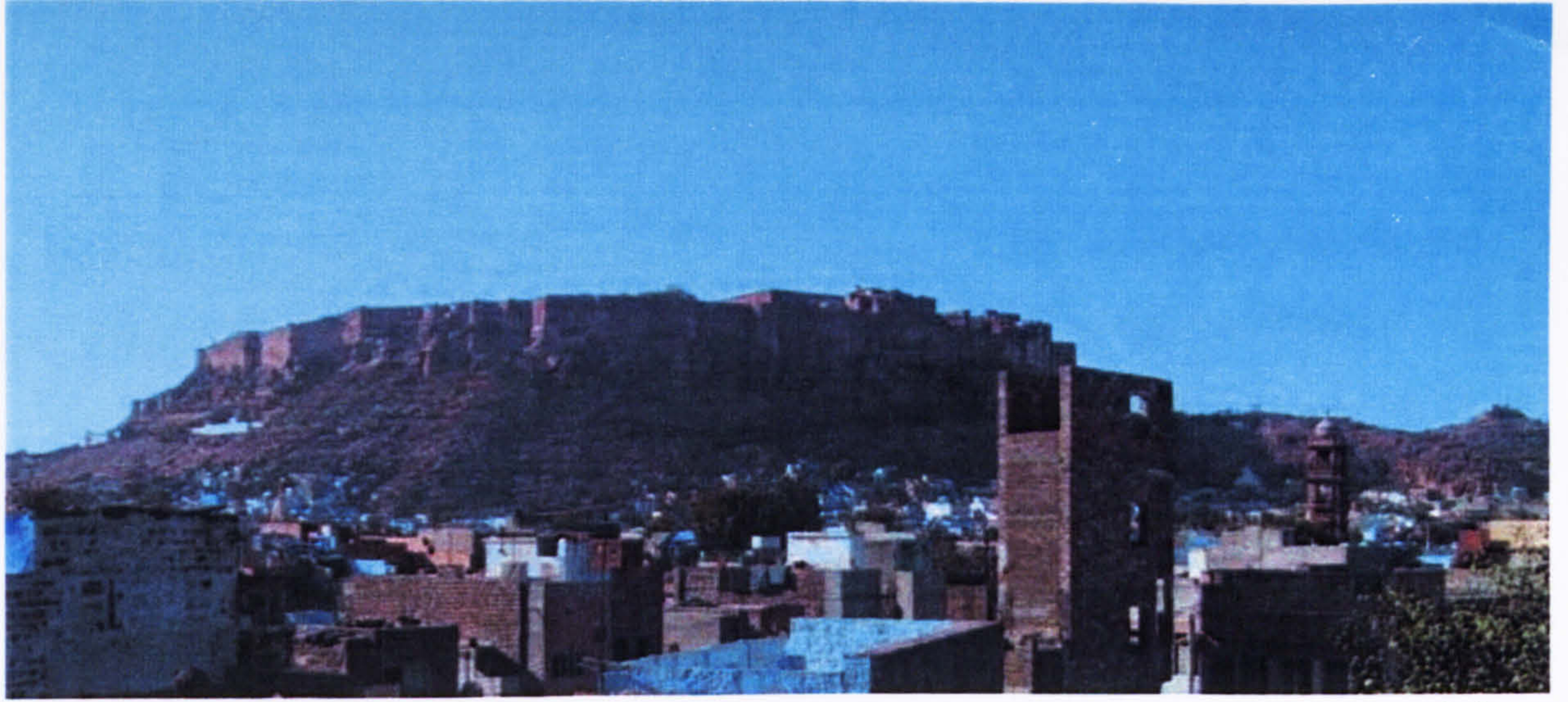
<sup>3</sup> Lynch, Kevin. 1989. p.79





**Figure 3.2 - Generic form of a medieval settlement in Rajasthan showing a concentric pattern of development.**

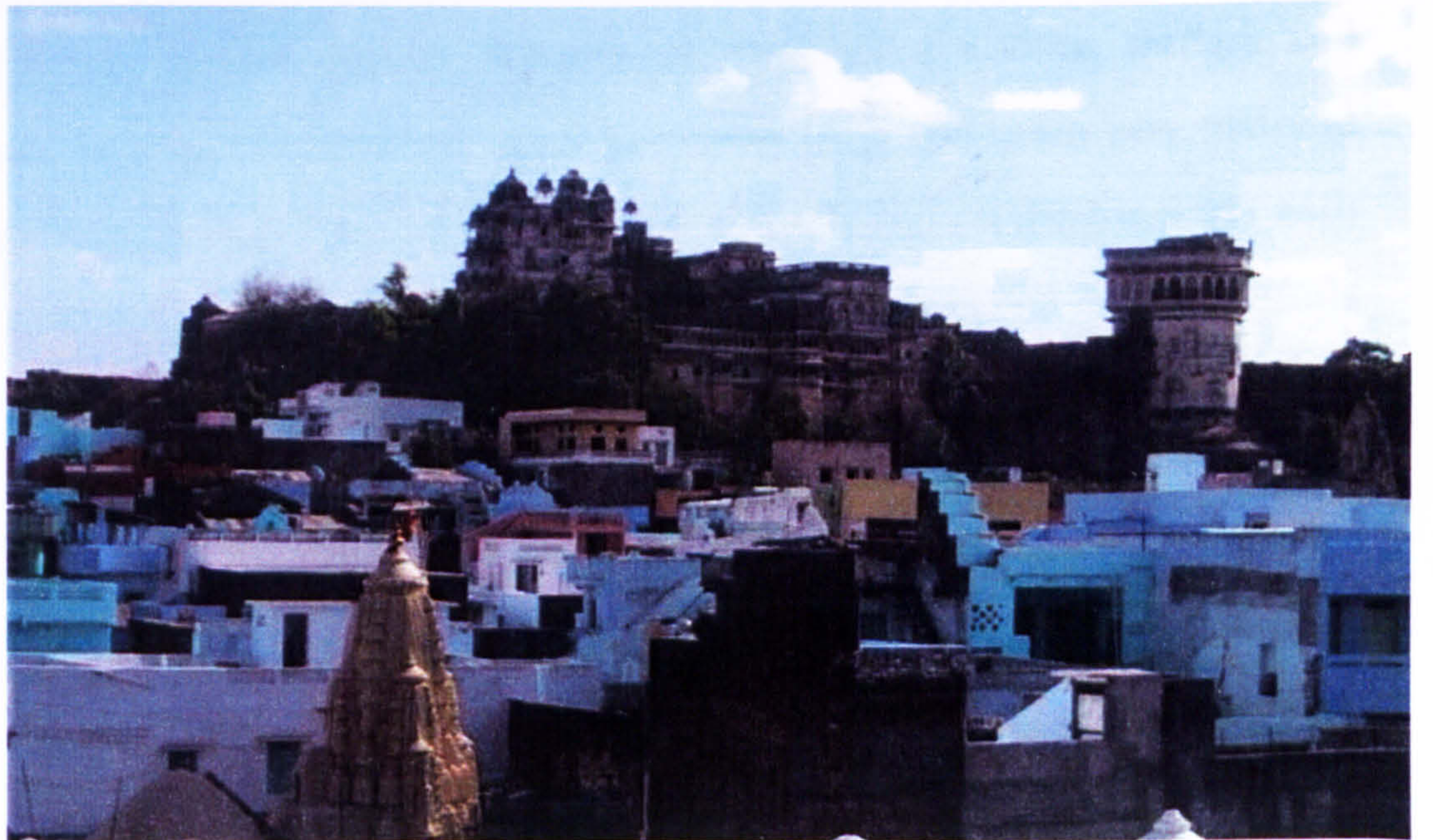




Jodhpur



Bundi



Banswara

**Figure 3.3 - Views of a few Medieval Rajasthani Towns**



The two polarities of nature, mountains and water body marked significant reference points as the destination and the access point of the settlement. A concentric sketch as shown in Figure 3.2 can represent a generic form of a typical medieval town of Rajasthan. Any planned settlement began with the location of the political centre or the ruler's abode that was placed at the top of a hill (the geographical centre) or at the highest point on the terrain. The presence of a religious deity marked the reference point for the ruler's abode and the rest of the city e.g. Ambikeshwar temple in Amber, Sun temple in Jaipur, Ganesh temple in Ranthambor, Samode Palace in Samode etc. The name of the town was associated with the political or religious centre (See Table 3.1 for details of towns like Amber, Jaipur, Sanganer, SawaiMadhopur, Jodhpur, Jaisalmer etc.). In a town, if political authority is Muslim then it is located in one corner, if Hindu it is in the centre. In most of the towns of Rajasthan, the political head was Hindu and the ruler's abode is located in the centre. The cities and towns had a hierarchical layout: Brahmin *havelis* were located close to the fort or palace as the ruler conducted most of his administration after consulting the royal priests. Also, their presence was essential to conduct any social or religious ceremony of the palace. *Havelis* of significant nobles, traders and financiers were next in succession, usually overlooking the main processional streets. Rajput *thakurs* were provided with agricultural land on the outskirts with the *havelis* normally located outside the walled city as observed in the capitals of Jodhpur, Jaisalmer and Jaipur. This was because they belonged to the ruling clan and were prospective adversaries of the ruler, in one sense. The city gates in these medieval towns were definite demarcations at each point establishing the hierarchy at each level. All these towns have the typical characteristic of a medieval city, demarcated by two or three concentric fort walls with the fort or king's palace at the most strategic location surrounded by a dense fabric of the



dwelling units or the *havelis*. Each city wall also expresses the expansion and growth of the town from the centre outwards. In the case of Samode, it is interesting to note the reenactment of the religious centre (Sriram temple) with the construction of each city wall. Also, the political hierarchy between the rulers of Samode (Chauhan Rajputs) and the dwellers (*Yaduvanshis*) corresponds with the location of their respective religious centres; Sri Ram temples on the main axis and Krishna temples in the inside town. The shifting of the capital from Dausa to Amber and finally to Jaipur involves similar means of centric demarcation by the ruling clan of the Kachwaha Rajputs. Significant aspect of this centric demarcation is the reenactment of the religious deity of the ruler along with the abode. Thus, a hierarchical continuity was maintained even with the shifting of towns. It is observed in the moving of the shrine of NaharSingh Bhomiya from Dausa to Amber and finally at Galtaji in Jaipur along with the political shift of the capital. The hierarchical order was also maintained in the relocation of the *havelis* of the ministers, specifically observed in Sanghi Jhoontharam's *Haveli* and Bhatt Rajaji's *Haveli* that were relocated from Amber to Jaipur with the shifting of the capital.

### **Classification of Towns**

Beyond this generic form, the towns can be further classified on the basis of factors like urban planning, political status, topographical features and economical structure. There is no existing study that categorizes the city structure of these medieval towns in Rajasthan. Kulbhushan Jain (1987) has done a study of the generic medieval town in Rajasthan. It mentions a few similarities between the three towns of Jaisalmer, Jaipur and Udaipur but there is no attempt at comparing the regional differences in the city fabric or the



topographical variations that affect the form. Another researcher, Maria Sgroi Dufresne analyses the post-Jaipur mercantile settlements in Shekhawati region.<sup>4</sup> According to her, the towns of Shekhawati were similar in character based on Jaipur as a role model. The *shilpis* (masons) were from Jaipur and the towns were developed by Marwari patrons between 1830 -1930 A.D. These towns had the East-West axis as the main commercial street and plain land was developed and allotted by the ruling *Thakur*. The choice of foundation site was based on a headland for the fort with a commanding view and merchants' *havelis* were usually located on North/ North East of the fortress. Axial streets were made to allow ritual circumambulating during *Holi* and *Gangaur* processions.

Since this research attempts to categorize the *havelis* in different regions of Rajasthan, it is important to demarcate the urban characteristics of the medieval towns that have an impact on the *haveli* form. The simplest classification can be based on Kostof's definition of planned towns and spontaneous towns in *Dwellings, Settlements and Tradition*, 1989. Rather than classifying them as urban towns (Kulbhushan Jain, 1987), it is more feasible to consider the urban rural continuum and say that these were planned settlements always initiated by a ruler's need to establish a town. In the case of Rajasthan this basic settlement pattern survives from the time of the foundation of the towns. The ruler created the predominant organising focus of the town, and invited people of different castes and gave them incentives for settling in the town. This is evident in the city of Jaipur where the ruler Jai Singh (1728 A.D.) formally implemented the planning and invited *Brahmins* from Varanasi and influential Marwaris (trader class) from different parts of Rajasthan to promote business. The land was given to these people at prime locations with incentives in the form of loans. Similar

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<sup>4</sup> Dufresne, Maria Sgroi. 'Indian Town Planning Tradition,' *A+D*, Jul-Aug.1990



developments are observed in post Jaipur towns such as Alwar, Sanganer, SawaiMadhopur, Jhalrapatan, and the Shekhawati towns. Besides these mercantile towns, even the military based towns had the predominant focus with the ruler's abode and a hierarchical development. It is very rare to find the second category of spontaneous towns in Rajasthan with its unusual characteristic of being like a collection of small villages. In such cases, a ruler establishes the town by integrating small spontaneous settlements in the region. ('synocesis' termed by Spiro Kostof). Tonk is one such spontaneous settlement covered in the fieldwork. But even in Tonk, the ruler gives his abode a central focus as a way of organising the fabric.

Once it is established that majority of the towns of Rajasthan were planned settlements, the type of land available for the *havelis* depends on three factors

a) Urban planning pattern (whether it is grid iron, radial etc.): The urban planning can be categorized with Jaipur city as the marker. The towns that developed before Jaipur (i.e. before 1728A.D.) follow a non-axial, organic pattern responding to the hilly terrain as observed in Jaisalmer, Amber, Udaipur, Jodhpur etc. The post Jaipur settlements follow the grid iron pattern of Jaipur with axial and symmetric planning. Bye laws relating to the town also had an impact on the form for example in Jaipur city, no residential house had an access from the main streets. In Sirohi, no projections were allowed on the main processional streets and in Udaipur, no built form could be made higher than the palace. These facts were related in interviews with the local historian in these towns.



b) Topographical variations: Under this category, the towns of Rajasthan can be classified as hill towns, hill towns with water bodies, valley towns, or towns on the plains.

c) Economic structure: There are of four kinds of economic basis of these towns: military, agrarian, mercantile and religious towns. The impact of the economic structure can be observed in case of Udaipur. It was predominantly a feudalistic base with more Rajput nobles in the city hence, the *havelis* are more spread out and palatial like the ruler's abode, despite a very hilly terrain. At the political level, the towns can be classified with the bigger towns and the main seat of the ruler as the capitals and the smaller surrounding towns under it as the *thikanas*.

**3.3 Sub regional variations in the *Haveli* form due to Town Typology**

Table 3.1 provides the categorization of the towns covered in the fieldwork using the classifications mentioned above. This data is based on fieldwork and historical descriptions from the gazetteers of Rajasthan region. The urban matrix in Table 3.1 analyses the impact of these factors on the available plots for the *havelis* of people from different castes.

In **Dundhar Region**, most of the *haveli* plots are regular, rectangular or square. Even in the pre Jaipur, hill towns like Dausa and Amber that follow the organic, non-axial pattern, the *havelis* have rectangular plots. The town of Sirohi in Godwad region has narrow rectangular plots, conforming to the urban fabric in neighboring Gujarat.



**Table 3.1**

REGION	Dundahar region was the home of the Kachwaha Rajputs of Rajasthan. It started as a small region from Dausa in the 11 <sup>th</sup> century and E xpanded beyond Jaipur by the end of nineteenth century, including a number of small villages such as Fagi, Malpura, Samode, Sanganer, Chaksu etc. Five towns of this region are covered in the field visits.,				
TOWN	ASSOCIATED MYTH / HISTORICBACKGROUND	TOPOGRAPHY	ECONOMIC STRUCTURE	URBAN FABRIC AND HAVELI PLOTS	HAVELI OWNERS
Amber	The town was established by Kachwaha Rajputs in 1037 A.D. and was the capital of Dundhar from 11 <sup>th</sup> to 18 <sup>th</sup> century. It was named after Ambikeshwar .	It is located in a valley of the Aravalli range, 5 miles from Jaipur, entirely surrounded by hills.	Military	Streets ran on the slope. Plots for havelis are rectangular in the ratio 1:2 with longer side facing the street. Single and double court havelis. Courts are at different levels. Average Plot size for two court is 10,000 Square Feet.	Rajput <i>thakurs</i> , <i>raj purohits</i> and other Hindu ministers.
Dausa	The first capital of Kachwaha Rajputs established in the beginning of 11 <sup>th</sup> century (1006 - 1036 AD) by Dulha Rai.	Stands on a slope of a large isolated flat hill – 4 miles in circumference and fortified with a loophole wall and bastions.	Military /Agrarian	Irregular plots at levels.	Marwari (Trader caste) and Brahmins.
Jaipur	Established as the new capital of Dundhar in 1727 AD by Jai Singh. Named after the ruler. Currently it is the capital of Rajasthan. Largest town and commercial center of the state.	Located on plains at the foothills of Aravalli range with a ridge running through the town.	Mercantile	The city of Jaipur is renowned for its town planning based on a grid iron pattern with roads running in East- West and North South directions. The main East to West street runs 2 miles in length and falls on the ridge. The main processional streets are 111' wide, secondary streets are 55' wide and the tertiary ones 27 ½' wide. The plan was developed in four <i>chowkries</i> with the central one for royal residence. Chowkri Topkhana for Rajput <i>thakurs</i> , Chowkri Purani Basti for leading courtiers, Chowkri Vishewarji and Modikahna for Jain and Hindu traders. .Brahmin <i>havelis</i> of royal priests are square in most cases. Other plots are rectangular (1:2 or 1:3) with smaller side facing the street.	Rajput <i>thakurs</i> , <i>rajpurohits</i> , Marwaris, Muslim and Hindu ministers and nobles and religious sects like <i>dadupanthis</i> .
Sanganer	Established in 16 <sup>th</sup> century by Kachwaha King Sanga.	Located 7 miles Southwest of Jaipur on the banks of Aman-i-Shah river.	Mercantile	The city plan is 'gomukha'(cow faced) in shape with forked street pattern. The city wall has four gates with the main Eastern gate is triple arched. Plots are rectangular with single or double court. Average Plot size for double court – 5000Sft.	Marwaris, Brahmins and <i>dadupanthis</i> .
Samode	A principal 'thikana' of the Jaipur state was awarded to GopalSinghji by his father, ruler of Amber in the 17 <sup>th</sup> century.	Nestled amongst hills about 31 miles North of Jaipur.	Military/ Agrarian	Rectangular plots as single court havelis or clusters of single court havelis .Average single court haveli plot- 2000 Sft.	Marwaris, Brahmins, Dhabhais and other Hindu Ministers



Table 3.1					
REGION- GODWAD TOWN	Godwad region includes the districts of Sirohi , Pali, Jalore and Mount Abu. Some of these areas were included in the Mughal <i>subah</i> of Gujarat in the medieval times.				
	ASSOCIATED MYTH / HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE	HAVELI OWNERS
Pali	A trade centre and the place of origin of the Paliwal Brahmins.	The town is located on plain land that marks the beginning of the desert region.		Mercantile	Marwaris or Hindu traders.
Sirohi	Name from Saranwa Hills – ‘Sir’ (head) of the ‘rohi’(desert). .Sirohi was one of the large principal feudatory principalities attached to the Mughal Suba of Gujarat. The town was established by Rao Saisnal (Deorah Rajputs) in 1580 A.D. Founded in the early 15th century, Sirohi was the capital of the former princely state of Sirohi,	It is situated in a tract broken by hills and rocky ranges and stands on the western slopes of Sarawana hill. The region is drained by the western Banas river and tributaries of the Luni and Sukri rivers.	Rectangular plots with smaller frontage (1:2). Single to three court <i>havelis</i> with small inner court. Average plot – 3000-5000 Square feet.	Mercantile	Very few households of large size.(10 members or more) Mainly <i>mahajans</i> (Hindu traders) and Rajputs.



Table 3.1

REGION HADOTI	This region was ruled by the Hara Rajputs with Bundi as the first capital which was later shifted to the newer town of Kota. The local dialect of this area is Hadoti. Besides Bundi and Kota, the region also includes the border districts of Jhalawar and Baran adjoining the state of Madhya Pradesh.				
TOWN	ASSOCIATED MYTH /HISTORIC BACKGROUND	TOPOGRAPHY	ECONOMIC STRUCTURE	URBAN FABRIC AND <i>HAVELI</i> PLOTS	<i>HAVELI</i> OWNERS
Bundi	A medieval township of the Hara Rajputs The town was named after Bunda –a Mina chieftain in 1342 A.D.	Strategically located in a valley. Bundi is surrounded by the Aravalli hills on three sides.	Military	It is enclosed by walled fortifications with four gateways – Bhairon Gate on West, Chogan gate in South, Patanpol on East and Sehkul Baori gate on North. The town has narrow sloping streets. <i>Haveli</i> plots are rectangular with offsets or irregular and angled at places. Plots similar to Bundi town with narrow streets and organic growth pattern.	Rajputs ,Brahmins, <i>Dhabhais</i> , Muslim and Hindu nobles.
Kota	Declared as a capital in the 17 <sup>th</sup> century by the Mughals, It was ruled by Hada ruler Madho Singh after he built the Palace in 1625 A.D.)	Located on fertile plains on the eastern bank of river Chambal.	Mercantile	The principal entrance of the palace is in the centre of Eastern side, approached by a principal street or <i>bazzar</i> running East and West. <i>Haveli</i> plots are square or rectangular reflecting post Jaipur influence. Single to three court <i>havelis</i> . Plot size between 6000-15000 Square feet.	Rajputs, <i>rajpurohits</i> and Marwaris
Jhalawar	It literally means the land of 'Jhalas' which was the ruling Rajput clan. Jhalawar regions was formed as a separate principality from Kota (with 17 districts), by descendants of Zalim Singh in 1838 A.D. During the Mughal period Jhalawar was included in the Subah of Malwa and Raghav Dev Jhala received this pargana in jagir in 1420 A.D. It was linked with the rulers of Kota from 1801-1838 A.D.	Located in the Southeast region of Rajasthan at the edge of the Malwa Plateau.	Mercantile		Rajputs, Bohras and <i>rajpurohits</i> .
Jhalra patan	This town was established by Zalim Singh in 1796 A.D., about ½ mile North of the ruins of old town that was destroyed by Aurangzeb. The dressed stone from the ruins was used to build the houses. An entire township resides within the confines of a wall, that was built to protect the trade caravans as it was the junction of caravan routes.	The present city is located at the foot of a low range of hills running from Southeast to Northwest. Drainage from these hills to the North of town is collected from Gomti Sagar.	Mercantile <sup>1</sup>	Grid Iron roads with city gates in four directions and city walls in red sandstone. Rectangular and square plots reflecting Post Jaipur urban influence. Single court <i>havelis</i> with average plot size – 5000 Square feet.	Mainly, Marwari traders and a few Brahmins.

<sup>1</sup> To encourage habitation, Zalim Singh had a large stone tablet erected in the centre of the chief *bazzar*, on which was engraved the promise that whoever settled in the town would be excused payment of customs and that any settler convicted of a crime would nor receive punishment exceeding a fine of Rs. 1-4-0. These terms attracted traders from Marwar and Kota. (From Gazzetter 1964)



Table 3.1					
REGION-MARWAR	The earlier centre of this region was Sojat and later, Jodhpur. Desert cities of Bikaner, Pokhran and Jaisalmer also fall in this region. The Bhatti Rajputs ruled this region in the desert area and Rathors ruled the Jodhpur region.				
TOWN	ASSOCIATED MYTH /HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE	HAVELI OWNERS
Bikaner	The city was founded in 1486 A.D by the Rathore prince, Rao Bikaji, hence the name Bikaner. Bikaji was son of Rao Jodhaji who had asked his son to establish a kingdom of his own.	Uneven sandy desert land.	A 2.5 miles wall with five entrances (18 <sup>th</sup> century) was built to protect the city from vagaries of the desert and any external aggression. The city flourished as an important trade center between Gujarat seaports and West Asian countries	Mercantile	Hindu traders
Jaisalmer	Rawal Jaisal, a Bhati Rajput, laid the foundation of this city in 1156 A.D.. Trikuta was the hill chosen and Jaisal abandoned his old fort at Lodurva and established this new capital.	The Bhati Rajputs of Jaisalmer were feudal chiefs who lived on the forced levy on the caravans that crossed their territory en-route Delhi. These caravans, laden with precious cargoes of spices and silk brought great wealth to this town.	Upper fort city is triangular with radial street pattern while the lower one is an irregular polygon with almost grid-iron pattern. Single and double court Havelis or fraternal clusters. Rectangular plots with narrow front (1:2)	Military/Mercantile	Rajputs, <i>rajpurohits</i> and Hindu ministers and traders.
Jodhpur	The city was founded in 1459 A.D. by Rao Jodha.	This city was on the silk route of the 16th century and hence was host to a number of travelers.	A 6 miles long 16 <sup>th</sup> century wall surrounds the old Jodhpur with eight entrance gates. The streets are at different levels and the plots for <i>havelis</i> are irregular and angled in most cases. Double to multiple court <i>havelis</i> as single family clusters. Average plot size – 3000 –30,000 Sft.	Mercantile	Rajput <i>thakurs</i> , <i>rajpurohits</i> , Hindu traders and ministers.
Phalodi	Founded in the middle of 15 <sup>th</sup> century by Rao Naro of Marwar. Named after a Paliwali Brahmini who settled there.	Located midway between Bikaner and Jaisalmer on desert land.	Fort is located on the hill with a network of narrow streets in the town below. <i>Haveli</i> plots are rectangular plots (1:2) with an average area of 2000 Square feet.	Military/Mercantile	Hindu traders
Pokhran	Rao Maldeo of Jodhpur established the town (1532-1584 A.D.) after conquering it from Bhatti Rajputs of Jaisalmer	Situated 66 miles from Jaisalmer on a small sandy hill in the desert region.	Narrow rectangular plots (1:3) with single court <i>havelis</i> around 1200 Square feet in area.	Mercantile	Hindu traders
Sojat	The old name of this place was 'Sudhadanti'. It was the centre of Marwar before the city of Jodhpur.	Sojat is situated on the left bank of the Sukri river at a distance of 68 miles from Jodhpur.		Mercantile	Hindu traders



Table 3.1				
REGION	Merwara was one of the smaller regions of the Rajputana Agency. The significant capitals and other cities of this region include the early capital of Kishangarh, the city of Ajmer, holy city of Pushkar and other areas like Nagaur and Merta city adjoining the Marwar region.			
MERWARA TOWN	ASSOCIATED MYTH/HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE
Ajmer	Rao Maldeva of Marwar took possession of Ajmer in 1535 A.D. and in 1558A.D. it came under Akbar. Contributions to the city were also made by Jehangir and Shahjahan.	Located on fertile land on the shore of Lake Ana Sagar, it is surrounded by hills.	In 1571 A.D. the city was bounded on North by the Delhi gate (still standing), on the east by the Bansphad Darwaza (now rebuilt). This was the western end of the Naya Bazar. On the South, was the Diggi Darwaza demolished in 1883 A.D. and on the West by the Tripolia Gate. The Havelis in Dargah area have transformed into guest houses -due to accommodation pressures during the festival of 'urs' and no muslim havelis could be studied .Existing Marwari havelis are multiple court fraternal cluster type with rectangular-square plots of area upto 25,000 Sft. A double court Maratha haveli in a smaller plot (rectangular 1:2.5) measures 8000 Sft	The historic <i>havelis</i> of the city belong to the early thirties of the nineteenth century, when a few rich <i>mahajan</i> (trader) families from Marwar and Jaipur came and settled in Ajmer under the security of the British Raj. Some Muslim <i>havelis</i> also existed in the Dargah area, but now all the structures in that area have changed.
Kishangarh	This was the original capital of Merwara region. The fortified town still retains the medieval character.	Located about 20 miles from Ajmer on a small hillock.	Double court havelis and clusters in recatangular plots (1:2, 1:3) or Single court havelis in square plots. Average Plot size-	Hindu traders, <i>rajpurohits</i> and Muslim nobles
Pushkar	Pushkar is a renowned ancient holy city created by Brahma. .In 1617 A.D. Pushkar jagir was granted to Brhamins.	The town and the lake of Pushkar are surrounded by hills, on three sides, with temples on them. On the fourth side are sands of Marwar.	The town of Pushkar is divided into two parts – Badi Basti and Choti Basti. Square or rectangular plots (1:2) with single or double court temples.	The population of Pushkar is mainly of Brahmins as almost every house in the city is a temple. All the <i>havelis</i> are in the typology of temple <i>havelis</i> - built by affluent traders and Rajput rulers and <i>thakurs</i> with the <i>pujaris</i> residing in them.

Table 3.1

<sup>2</sup> One of the first to settle was the family of Seth Ramprasad Agarwala from Jhunjhunoo in Shekhawati. Other noteworthy traders are Seth Pooran Mal of Ganeri who built three *nohras* and houses in the Nayabazar and a Patwari family of three brothers from Parbatsar. These three brothers also built temples in Pushkar and havelis in Ajmer. Jawahar Lal built a big haveli in Nahar Mohalla. .Some of the older havelis exist in the Lakhan Kotri area like Mammiyon ki Haveli (1791-1818 A.D.), Kanakmal Lodha's, Bhadurmal Agarwala's and the Mehta's havelis.



**Table 3.1**

REGION - MEWAR	Mewar is the oldest region of Rajasthan and the rulers , Sisodia Rajputs are known for their resistance to Mughals, The earlier capital was Chittor and its capital, Udaipur.				
TOWN	ASSOCIATED MYTH/ HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE	HAVELI OWNERS
Bassi	A small town close to Udaipur.		Single Rajput <i>Haveli</i> near the palace- Single court in square plot .	Military/Agrarian	Rajputs
Begun	One of the Udaipur <i>thinkanas</i> .	Located on a small hill close to the earlier capital of Chittorgarh.	<i>Havelis</i> within the Fort Complex.	Military/ Agrarian	Rajputs and Brahmins
Nathdwara	Religious town created by the arrival of idol of Sri Nath ji in 1672 A.D. The name Nathdwara means Gate of the Lord. The image was brought to Mewar, for the sake of protection during the period of Aurangazeb, the Moghul monarch	Located in a valley near the village of Srinar-20 miles. Nathdwara is situated 48 km north east of <u>Udaipur</u> in Rajasthan, on the banks of the Banas River..	Streets are stepped and sloping at various levels. Plots are square or rectangular with single court houses. Average House –2000 Sft.	Religious	Brahmins and Gujjars
Salumbher	Established in the 17 <sup>th</sup> century as a <i>thikana</i> of Udaipur by the thakur of Begun, Krishnadas Chundawat.	Located on the banks of Sarni river the town is surrounded by hills.	The fortified town wall has eight gates. Square plots and single or double court <i>havelis</i> . The outer town was designed by Jaipur <i>mistris</i> after 1761 A.D. and Hindu traders were invited in the town.	Military/ Agrarian	Brahmins and Hindu Ministers, Kotharis, Bhandaris etc,
Nimbahera	A small industrial town close to Chittorgarh.	Plain land.	Irregular plots with single to double court complexes in average plot area- 6000 Sft.	Mercantile	Marwari /Hindu Trader class
Udaipur	The city was founded in 1567 AD by Maharana Udaï Singh on the advice of a sage. Udaipur was last of the numerous Mewar capitals.	By the lake Pichola protected by an outcrop of Aravalli hills.	Radial street pattern focusing towards the palace and Jagdish temple chowk. Double, three and four court havelis. Plots are rectangular with offsets and most havelis spread in a plot area between 10,000 –35,000 Sft.	Military	Rajput <i>thakurs</i> , <i>rajpurohits</i> , Dhabhais, Kotharis etc.



Table 3.1		This region includes significant capitals like Rajgarh, Alwar and Tonk. Although, classified as one region, the areas have an individual identity. As the southern part Mewat was influenced by the adjoining states of Haryana and Delhi. The selected towns for study include Alwar, Rajgarh, Ranthambor, SawiMadhopour, Tonk.			
REGION - MEWAT BRIJ TOWNS	ASSOCIATED MYTH/HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE	HAVELI OWNERS
Alwar	Once an ancient Rajput state, formerly known as Mewat, Alwar was nearest to the imperial Delhi. Earlier ruled by the <i>muslim khanzadas</i> (convert <i>Rajputs</i> ), Alwar was established as a state by Maharaja Pratap Singh in 1771 A.D. It was under the Jaipur Kachwahas for some time. Rajgarh was the earlier capital of the region and has a number of <i>havelis</i> and a fort..	Alwar is nestled between a cluster of small hills of the Aravalli range.  It is located in a gorge of the Aravalli hills about 22 miles from Alwar. The fort is located on the hilltop with the town below on plain terrain.	It is a typical fortified town with five entry gates. Urban planning pattern shows post Jaipur influence with rectangular plots, Single to three court havelis. Average plot size- 6000-16000 Sft. Based on Jaipur grid and Mughal planning.	Military	Rajputs, <i>rajpurohits</i> , Marwaris and Muslim and Hindu ministers.
Rajgarh				Military	Marwaris and <i>dadupanthis</i>
Ranthambore and Sawai Madhopur	Ranthambore is well known for the historic 11 <sup>th</sup> century fort and 2-3 havelis are listed in the fort complex. Sawai Madhopur is a small town established by Sawai Madho Singh, a Kachwaha ruler of Jaipur. It marks the entry to the Ranthambore fort.	The town lies on uneven grounds not far from the range of hills in the North East of Alwar. Located South of Banas river rising from the Eastern flank of Aravallis	The town of Sawai Madhopur has grid-iron plan with post Jaipur influence.	Military	Rajputs and Marwaris
Tijara	The ancient capital of this region, found by a Yaduvanshi King named Tejpal. The later descendants became Muslim converts and were called Khanzadas. It was taken over by <i>Jat</i> ruler SurajMal in 1745-63 A.D		Main street is narrow running on various slopes and is paved throughout. Average single court plot – 2500 Sft.	Military	Marwaris
Tonk	According to the district Gazetteer, 1970 - during the reign of Akbar the Great, Tori and Tonkra districts were conquered by Man Singh, the ruler of Jaipur, and twelve deserted villages in Tonkra in 1643 A.D. were granted as Bhum tenure, a sort of land grant, to a Brahmin named Bhola who named his cluster, Tonk <sup>3</sup> The old walled town, which was capital of the former princely state of Tonk, was founded in 1643 and lies on the slopes of a small hill range. Nawab Ameer Khan as a result of a treaty with the British founded the modern tonk in 1818.		No organized urban pattern. Two main divisions of the old Tonk (before 1818 A.D.) and new Tonk are present. Muslim <i>havelis</i> in old Tonk are multiple court with average plot area around 10,000-15000 Sft.. New Tonk has Marwari <i>havelis</i> with square or rectangular plots. Single and double court havelis with average area around 2500 Sft –8000 Sft.	Military/ Agrarian	Muslim ministers and Marwari traders.

<sup>3</sup> Imperial Gazetteer of India, Rajputana.



Table 3.1					
REGION – SHEKHAWATI	'Shekhawati', meaning "the land of Shekha 's den " derives its name from Rao Shekha (1433 A.D.-1488 A.D.) of the Kachhwaha family of Jaipur, Earlier a part of the former Jaipur state, it now comprises of the districts of Jhunjhunu and Sikar.				
TOWN	ASSOCIATED MYTH/HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE	HAVELI OWNERS
Churu	Founded in 1563 A.D. by Churu, a chieftain of the Jats (an agricultural people of northern India.)	Churu district comprises a semi-arid sandy plain, watered only by the Katli River in the northeast.	Fort was built in 1739 A.D. and is located at the end of the main street. Another main street runs in perpendicular direction.	Mercantile	Marwaris
Fatehpur	It was founded by Kaimkhani Nawabs in the middle of the 15th century. It came under the Jalpur Kachwahas in 1799 A.D.	All towns of Shekhawati region are located on plain land that was in the route of the caravan trade.	All towns of Shekhawati region show post Jaipur urban planning with rectangular or square plots. Single, double and three court <i>havelis</i> or fraternal clusters up to eight courts are found in the region.	Mercantile	Muslims and Marwaris
Jhunjhunu	The town of Jhunjhunu was also founded by Kaimkhani Nawabs in the middle of the 15th century, and remained under their control until it was taken by the Rajput ruler Sardul Singh in 1730, which lasted till the Indian independence.			Mercantile	Muslims. Rajputs and Marwaris
Lachmangarh	Founded in the early 19th century by Raja Lachhman Singh of Sikar.		One of the most imposing forts in the Shekhawati region, Lachhmangarh provides a bird's eye view of the town modeled to resemble the city plan of Jaipur.	Mercantile	Marwaris
Mandawa	Nawal Singh, the 4 <sup>th</sup> son of Sardul Singh inherited this place and established it as a fortified town in 1756 A.D.			Mercantile	Marwaris
Nawalgarh	Founded in 1737 A.D. by Thakur Nawal Singh.		The stone walls, split by four gateways, were erected to encircle the town.	Mercantile	Marwaris
Sikar	Founded in the late 17th century, Sikar was the largest and the richest 'thikana' (Feudal State) under Jaipur.		The town was modeled to resemble the city plan of Jaipur. The walled city has lofty buildings, a massive fort and an array of splendid havelis and temples ornate with beautiful frescoes	Mercantile	Marwaris



TABLE 3.1					
REGION- VAGAD	Vagad region falls in the tribal belt with two main towns of Dungarpur and Banswara.				
TOWN	ASSOCIATED MYTH/ HISTORIC BACKGROUND	TOPOGRAPHY	URBAN FABRIC AND HAVELI PLOTS	ECONOMIC STRUCTURE	HAVELI OWNERS
Dungarpur	Founded in early 14th century by Rana Dungar Singh. It was part of the Gujrat <i>subah</i> at one time. K.C. Jain mentions that it was named after a Bhil chieftain Dungaria.	6 miles from Udaipur, this hilly town is set amidst the peaks of the Aravalli ranges.	Rectangular or square plots with single or double court havelis. Size -2000-8000 Sft. Dungarpur is famous for its unique style of architecture as seen in its palaces and noble residences. These royal residences are adorned by 'jharokhas' built in stone in a unique style typical of the area developed during the reign of Maharawal Shiv Singh (1730-1785 A.D)	Military	Rajput <i>thakurs</i>
Banswara	This state was founded by Maharaja Jagmal Singh. Bounded by Udaipur and Chittorgarh, the district presently comprises of the territories of former Banswara State and the Chieftainship of Kushalgarh.	The medieval town is surrounded by a stonewall, now in ruins. A palace of former rulers of Banswara stands overlooking the town.	Irregular plots with offsets.	Mercantile	Hindu traders (Marwaris)



In **Hadoti region** again, the hill and valley towns of Bundi and Kota show irregular plots with angles whereas the post Jaipur mercantile settlements like Jhalawar and Jhalrapatan have square or rectangular plots. **Marwar region** also shows an influence of Gujarat area. Except for a few *havelis* of Rajputs and Muslim nobles, the plots are narrow and rectangular with small single courts. In the **Mewar region**, the *havelis* of Udaipur city are built on large, sprawled out plots. Other surrounding towns have smaller plots. **Merwara region** has large rectangular plots as in the adjoining Dundhar region. **Vagad region** again has narrow rectangular plots. Thus, some basic observations regarding the land for *havelis* can be made from this chart. A more detailed classification is possible by looking into the ancient maps of these towns and the rules or byelaws, mentioned in the official documents at the time of *Rajwara*.

### 3.4 The *Haveli* and the Cluster

The *havelis* of Rajasthan range from a single courtyard house form to an assemblage of multiple courts. The majority of the *havelis* have one or two courtyards. However, a higher status of the owner or an increase in family members resulted in an increase in either the scale of the *haveli* or the number of courtyards. Smaller towns or *thikanas* normally have 1 or 2 courtyard *havelis* and the capital towns have 1 - 7 courtyard *havelis*. At times a single *haveli* with many courts like Natani *Haveli*, Jaipur or a complex like Nawab *ki Haveli*, Jaipur could be classified as a cluster. It is difficult to differentiate the *haveli* from a cluster in cases where the *haveli* complex itself is a cluster.



Like the settlements, a similar generic pattern of organization is observed at the cluster level with religious centres marked by the presence of a temple or a well. Identical to the political centre like the fort or palace at town level, the *haveli* of the most influential aristocrat is demarcated at the cluster level. Similar to the naming of the town, the naming of the cluster or the street is associated with the political or religious centre often, named after the most influential aristocrat in the cluster. Researchers (V.S.Parmar, Kulbhushan Jain) have discussed the settlement pattern of *havelis* in Gujarat and Rajasthan, but the cluster is taken just as a collection of a few dwelling units, of families belonging to the same caste. The religious centre of the cluster such as the temple or the well is the basic point of organization, as the social and religious life of the people in the cluster revolves around these. In the towns selected for this study, it was found that a typical cluster had the following qualities:

- a) **The ritualistic centre :** A temple or a well in the cluster that was used for rituals at the time of festivals. These were most of the time built by the most influential *haveli* owner in the cluster. The significance of the well water is evident in Hathiram's *Haveli* at Jodhpur. Despite the convenience of tap water today, the lady of the house walks every morning to the well and carries a bucket filled with water back to the *haveli* to conduct the morning prayers.
- b) **The political centre:** The scale of the dwelling in the cluster established the status of the owner. The association of a particular *haveli* with the temple or well in the cluster also emphasized the status of the owner. eg. The *haveli* of Rajput *thikana* in Uniara Rao's *raasta*, Jaipur, has a temple of Shanicharji, the *haveli* in Vidyadhar *ka raasta*, Jaipur, has a Shiva temple; Bohera



*thakur's Haveli* in Udaipur has a big temple and a *baori*, and Bagor *ki Haveli*, Udaipur, has a well, Bohra *Haveli*, Jhalawar has a temple and a well in the complex. Similar observations were made in other towns too. The paths and *chowks* associated with the cluster were also named after the most influential *haveli* owner in the cluster e.g. Pandit Shivdin *ka raasta*, Jaipur; Uniara Rao's *raasta* in Jaipur, seth ji *ka chowk*, Bundi etc.

- c) A number of dwelling units that comprised i) people of same caste and occupation e.g. the Brahmin *havelis* in Brahmapuri in Jaipur, Jodhpur and Jaisalmer, Gurjapura in Nathdwara etc. These can be termed '**caste clusters.**' ii) families of two or more brothers, e.g. Yadav family in Dhabhai *Haveli*, Samode, Rajput family in Khurrewali *Haveli*, Alwar or Patwa *Haveli* in Jaisalmer (Figure 3.5): these can be termed '**fraternal clusters**' c) a single family with the *zenana* and infrastructure of servants, e.g. Tatterkhana House, Jaipur or a religious cult e.g. Dadupanthi *havelis* in Sanganer and Rajgarh: these can be termed '**Single family cluster**' or '**Religious cluster.**'

Figure 3.4 and Figure 3.5 show the generic development of cluster types from single and double court *havelis*. Thus a single court dwelling extended into a double court one with increase in family structure and clusters evolved as per the requirements of the owner and his family. It is also possible to trace a chronological evolution on this pattern in some areas as the simple single and double court *havelis* of earlier period gave way to multicourt fraternal clusters found in the later period under Marwari patronage.



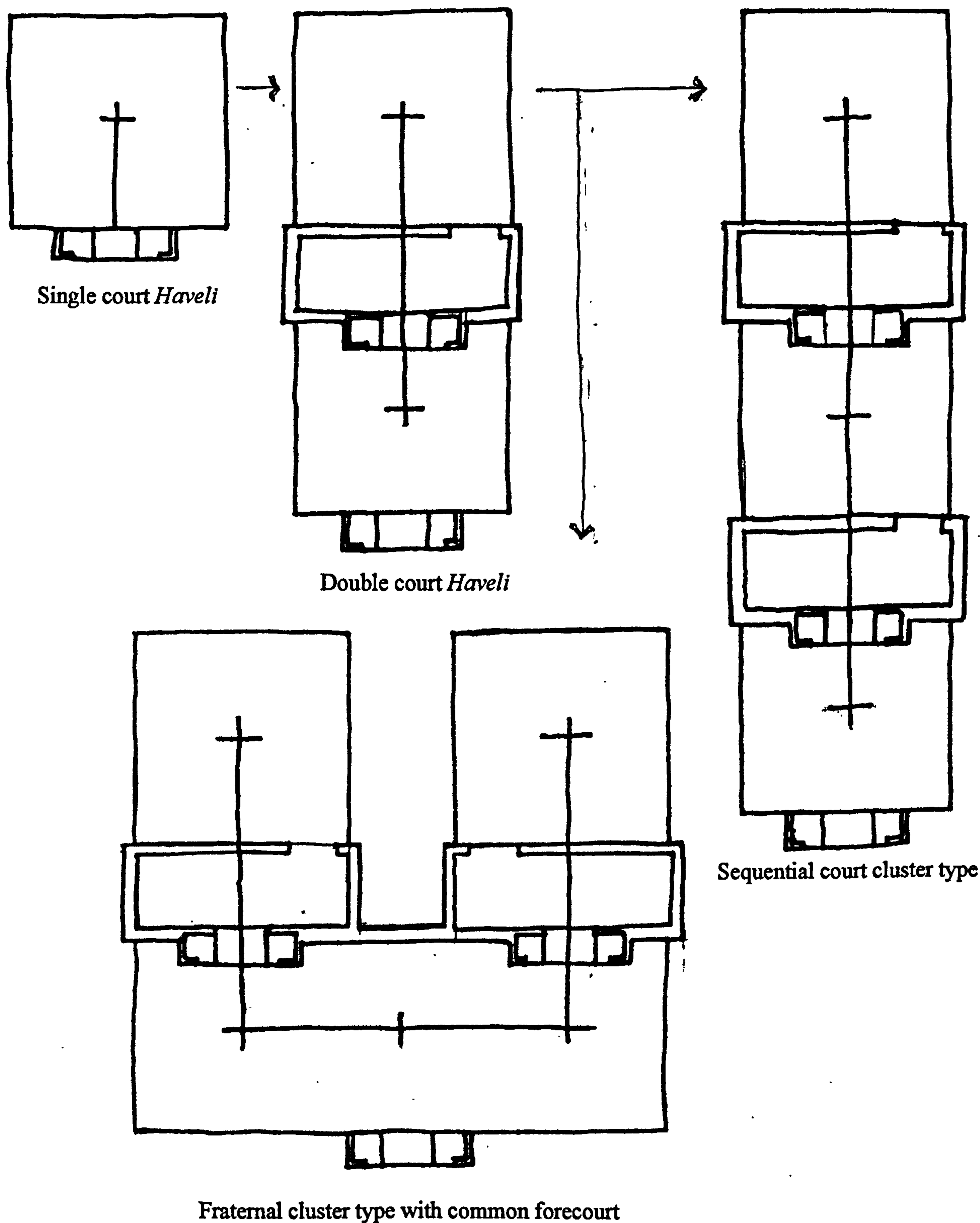


Figure 3.4 Centric evolution of Multi court *Haveli* Clusters



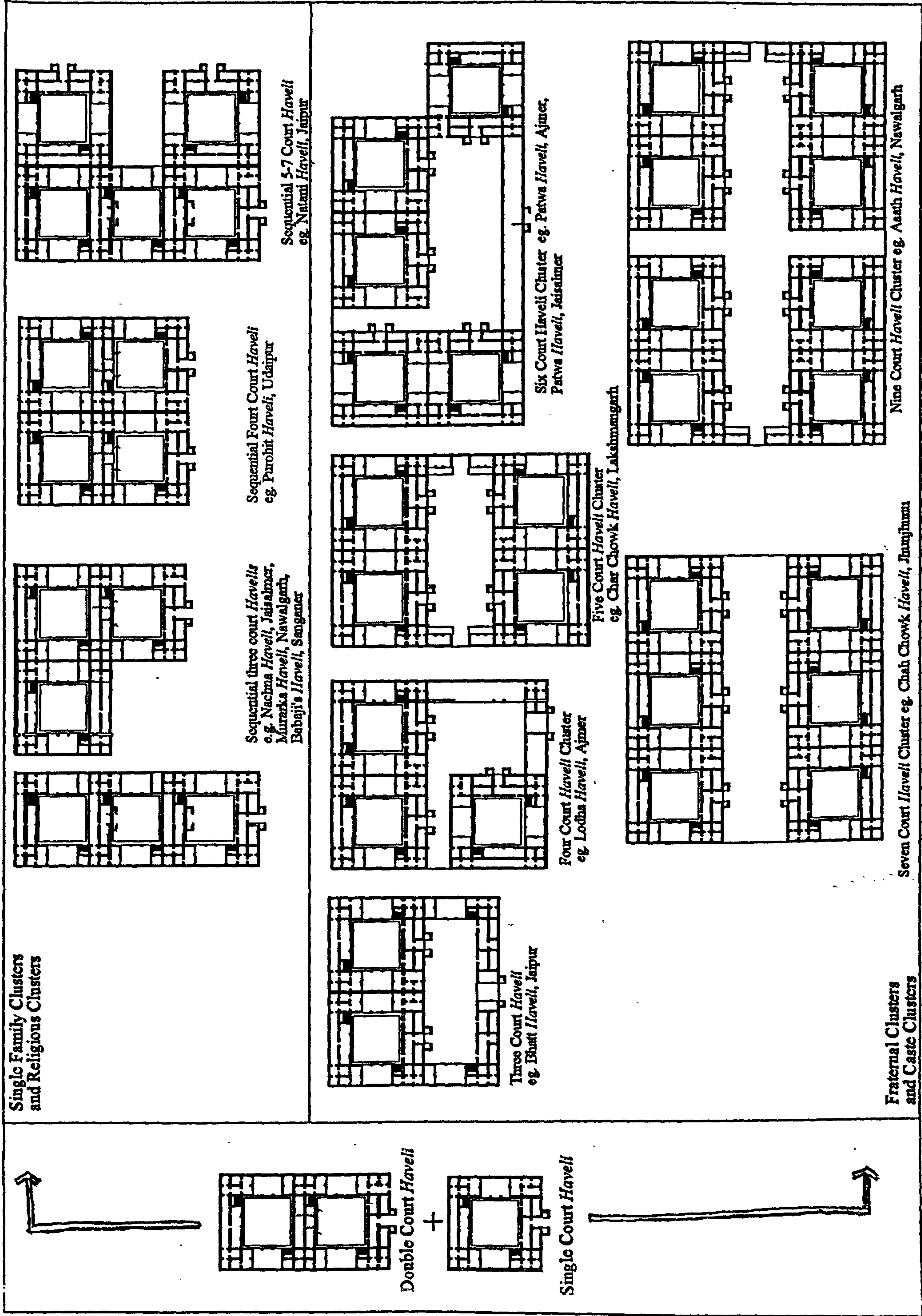


Figure 3.5 - Cluster Formations with Single Court and Double Court Haveli Form



### 3.5 The *Haveli* as a Dwelling Type

In Indian context, the dwelling unit has been termed as *prasada*, *griha*, *ghar*, *aavaas*, *niwas* etc. The meaning of all these terms is related to a place for shelter. Etymologically, the term *haveli* originates from the Persian term *haowala*; which was related to a piece of land. Later on, the land along with the dwelling was called a *haveli*. But, the term itself signifies the possession of land and a social status. The traditional practice of possession of land as a status of the ruling person has been ingrained in the Indian mind since agrarian times and is present till today. In an interview with a local *mistri* (mason) of Jaipur, it was found that the term *jaag* is also used locally for a dwelling unit. The meanings of this term *jaag* given in a dictionary of Rajasthani language can further explain this concept of *haveli*. The five meanings mentioned for this term include: a) place in the physical sense b) social position c) condition (financial) d) opportunity and e) house. As the term '*Jaag*', a *haveli* also encompasses the above meanings. The location and the type of *haveli* was determined by the owner's social, political and financial conditions that is, the caste, occupation and relation with the ruler. Hence, a social/political classification is more relevant for determining the typology of *haveli*. This caste classification can be further validated by the fact that all *havelis* were named and recognized by the owner's name that also reflected his caste.

The *haveli* in Rajasthan was primarily developed in the sixteenth century by Rajput *thakurs* and *jagirdars* who needed to demarcate their dwellings from the common man as well as associate their power with the ruler. In the towns of Rajasthan too, with change from agrarian and feudal base to trade and commerce, the patronage for constructing architectural mansions, temples and



*baoris* (wells) etc. moved from the hands of the ruling class to the affluent trading class. In a lot of ways, it is similar to the medieval mansions of European cities neatly defined by Kostof:

In prominent locations all over the hilly townscape, the principal families, many of them feudal nobility, had their *castellari*, fortified compounds with towers and other defensive appurtenances. These were rambling households with servant quarters, stables and warehousing facilities. The type was essentially the land based feudal nucleus of the countryside, brought within the urban fabric by the magnets when the action moved from the countryside into the city and the agrarian economy of the earlier medieval was superseded by an urban economy of banking and long distance trade.<sup>5</sup>

Based on the patronage and evolution pattern, two broad classifications of the *havelis* in Rajasthan are: the Rajput type, which is asymmetric, non axial, less ornate and more sprawled out and the Marwari type with regular square and rectangular plots, symmetric and axial planning and emphasis on ornamentation. But, beyond these two broad categories, the '*haveli*' as a dwelling had different meaning for different caste and profession. The change in the location and form of the *havelis* was based on the caste and occupation of the owner as classified below.

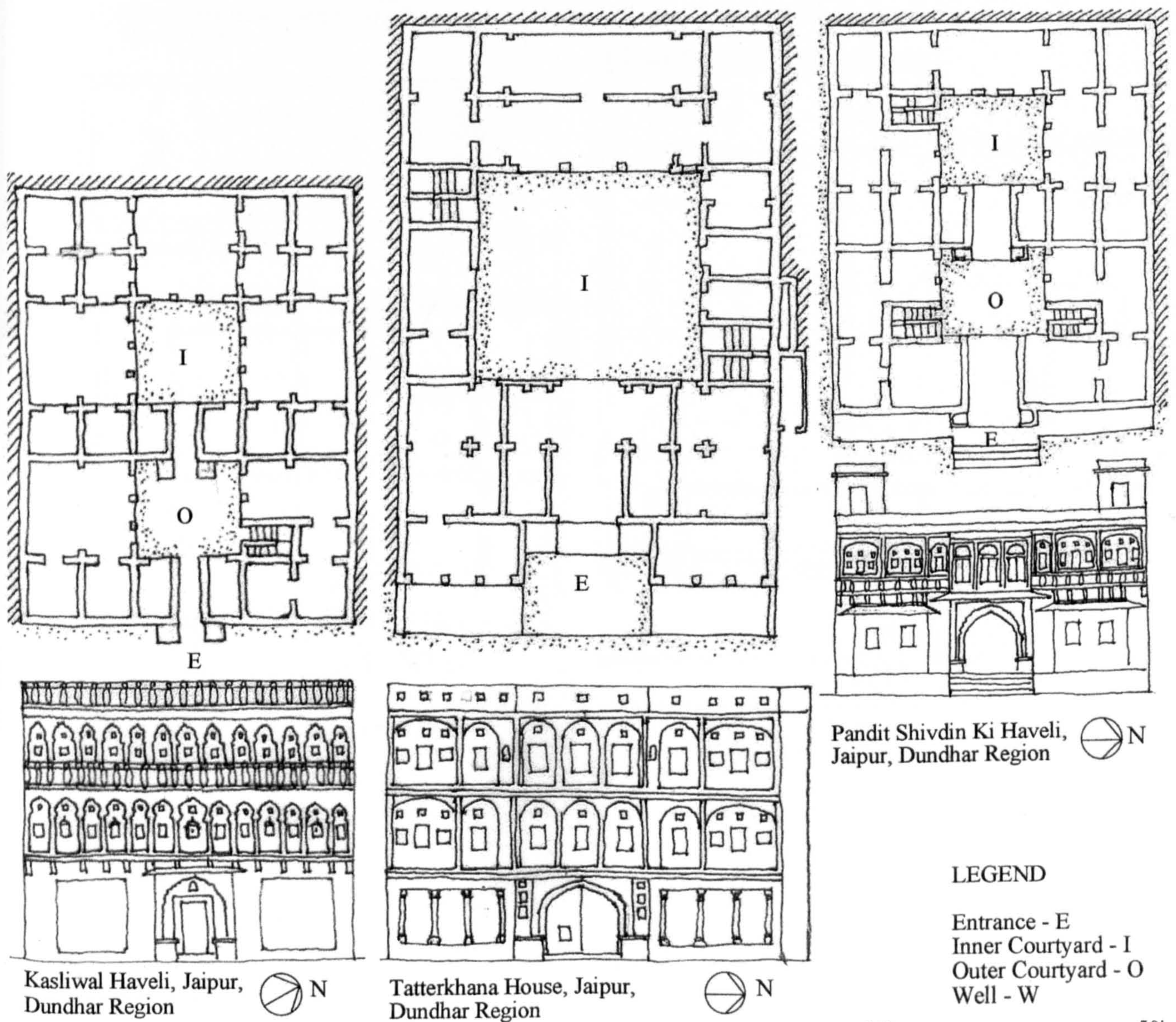
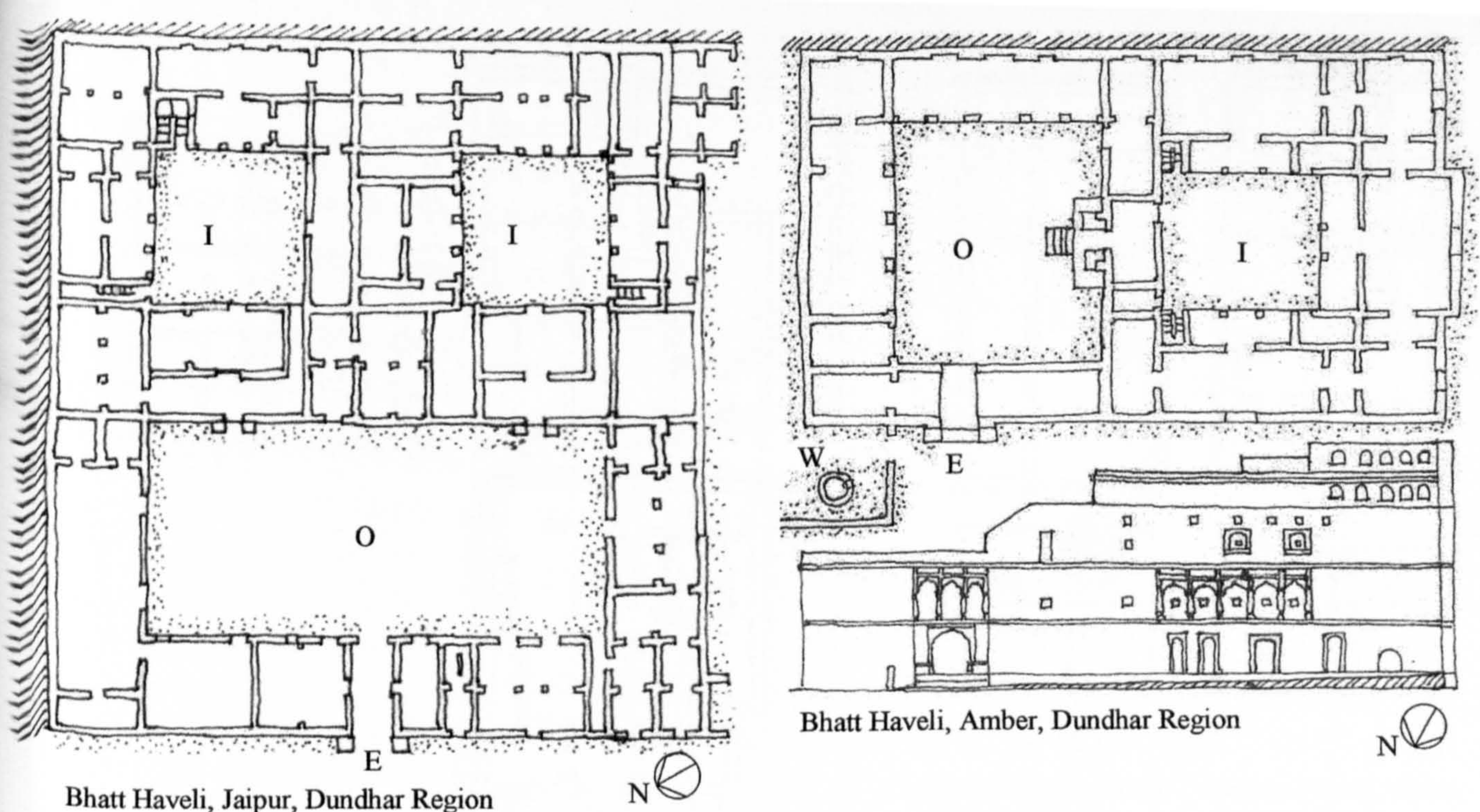
#### 1) **The *Havelis* of the Brahmin Caste** (Figure 3.6a and Figure 3.6b)

The Brahmin *havelis* are of two kinds. The first kind belonged to the *rajpurohits*. These royal priests were placed at the top in the social hierarchy. They had a special role, as they were involved in the religious rituals of the rulers performed at all occasions

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<sup>5</sup> Kostof, Spiro in *Dwellings, Settlements and Tradition*, 1989. p. 111





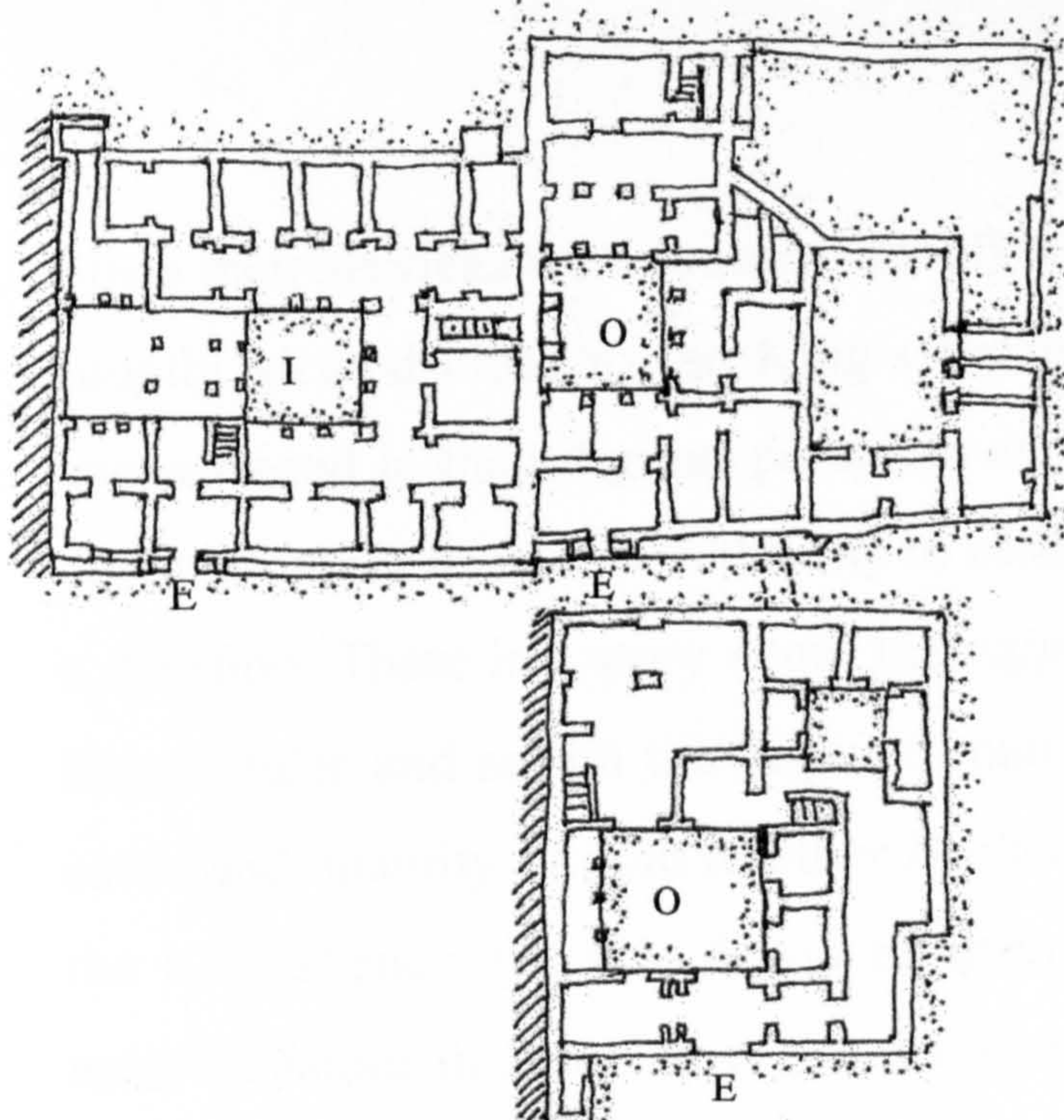
#### LEGEND

Entrance - E  
 Inner Courtyard - I  
 Outer Courtyard - O  
 Well - W

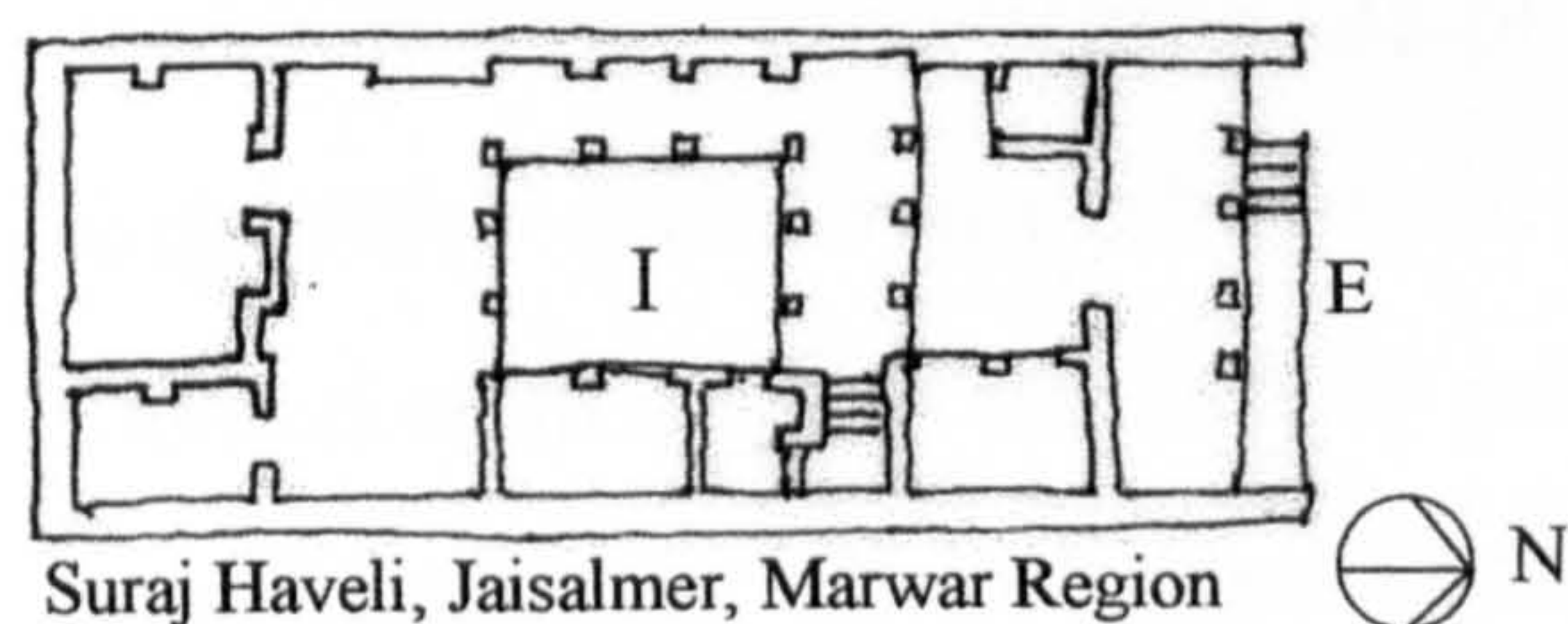
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Figure 3.6 a - *Havelis of Rajpurohits and Brhamin Ministers, Dundhar Region*

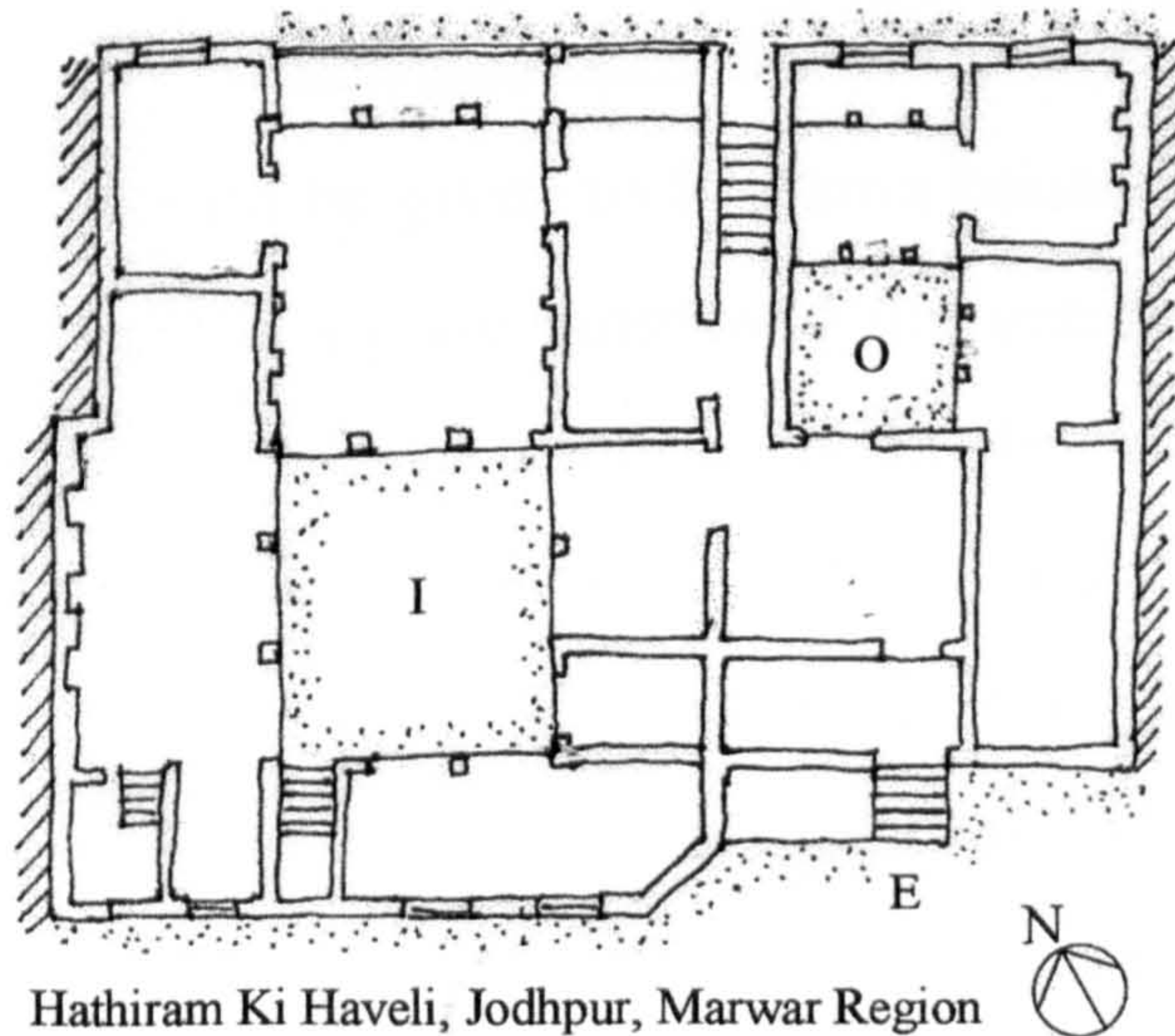




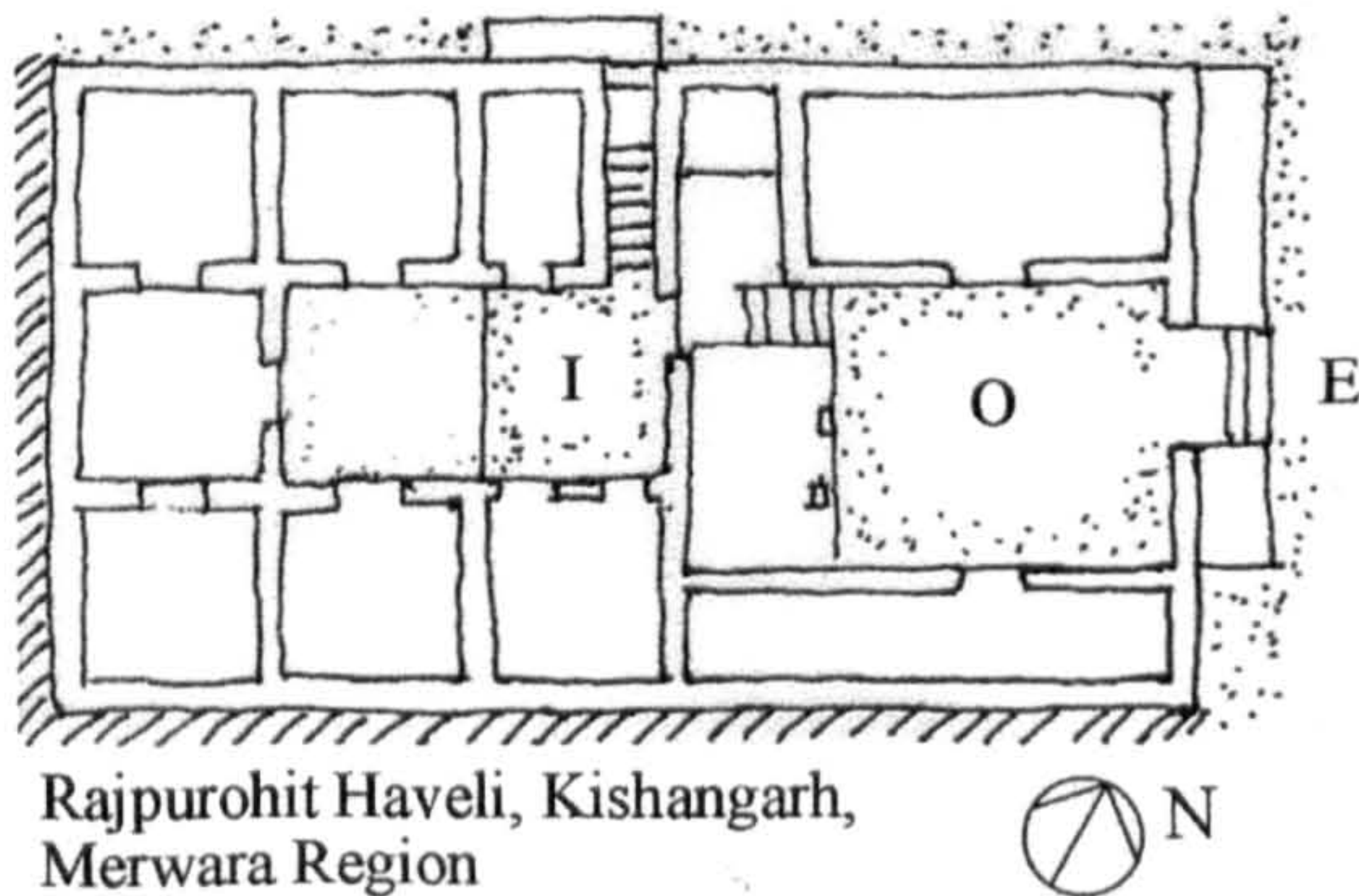
Bade Devta Haveli and Nohra, Kota,  
Hadoti Region



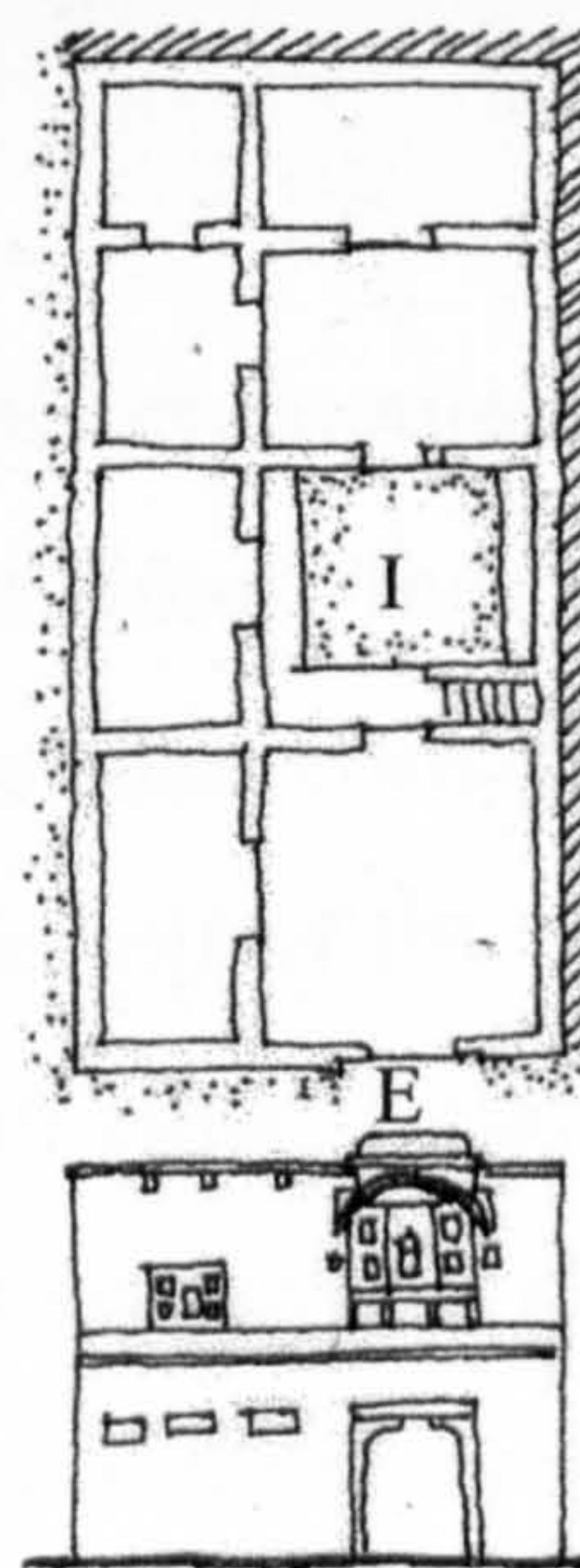
Suraj Haveli, Jaisalmer, Marwar Region



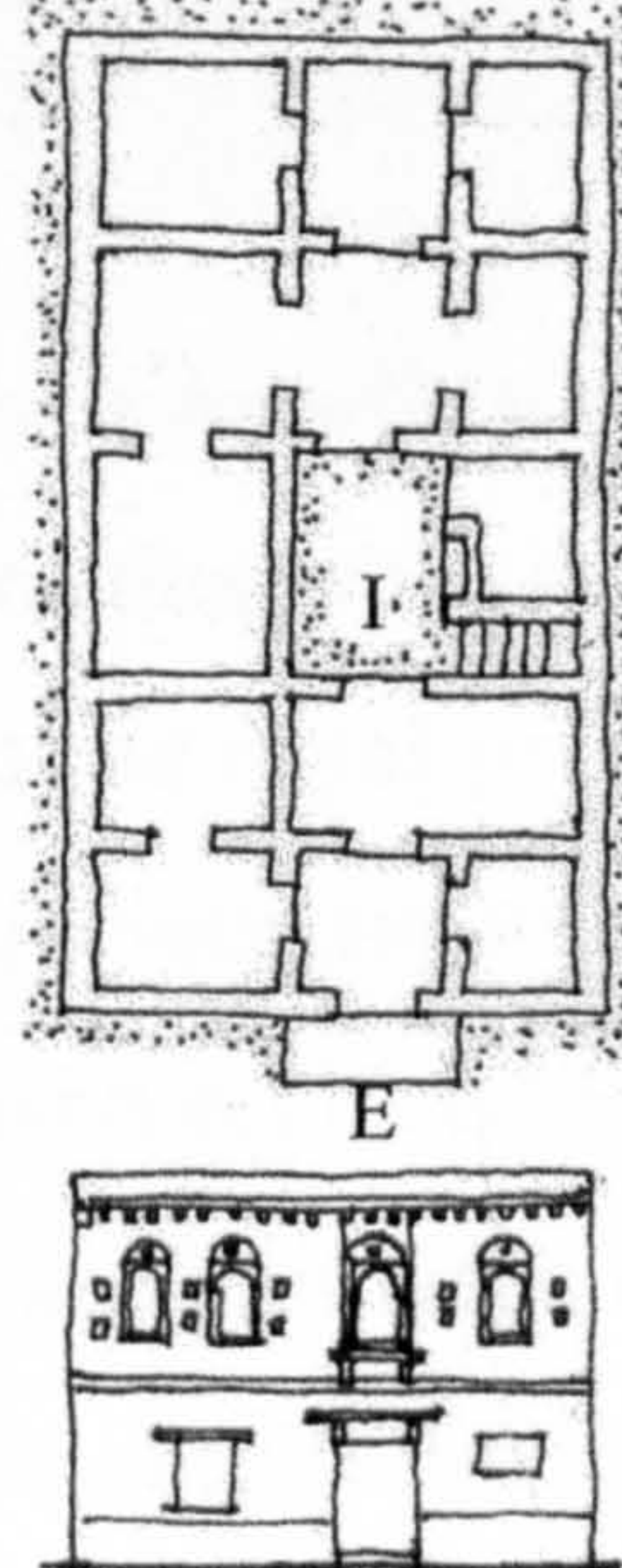
Hathiram Ki Haveli, Jodhpur, Marwar Region



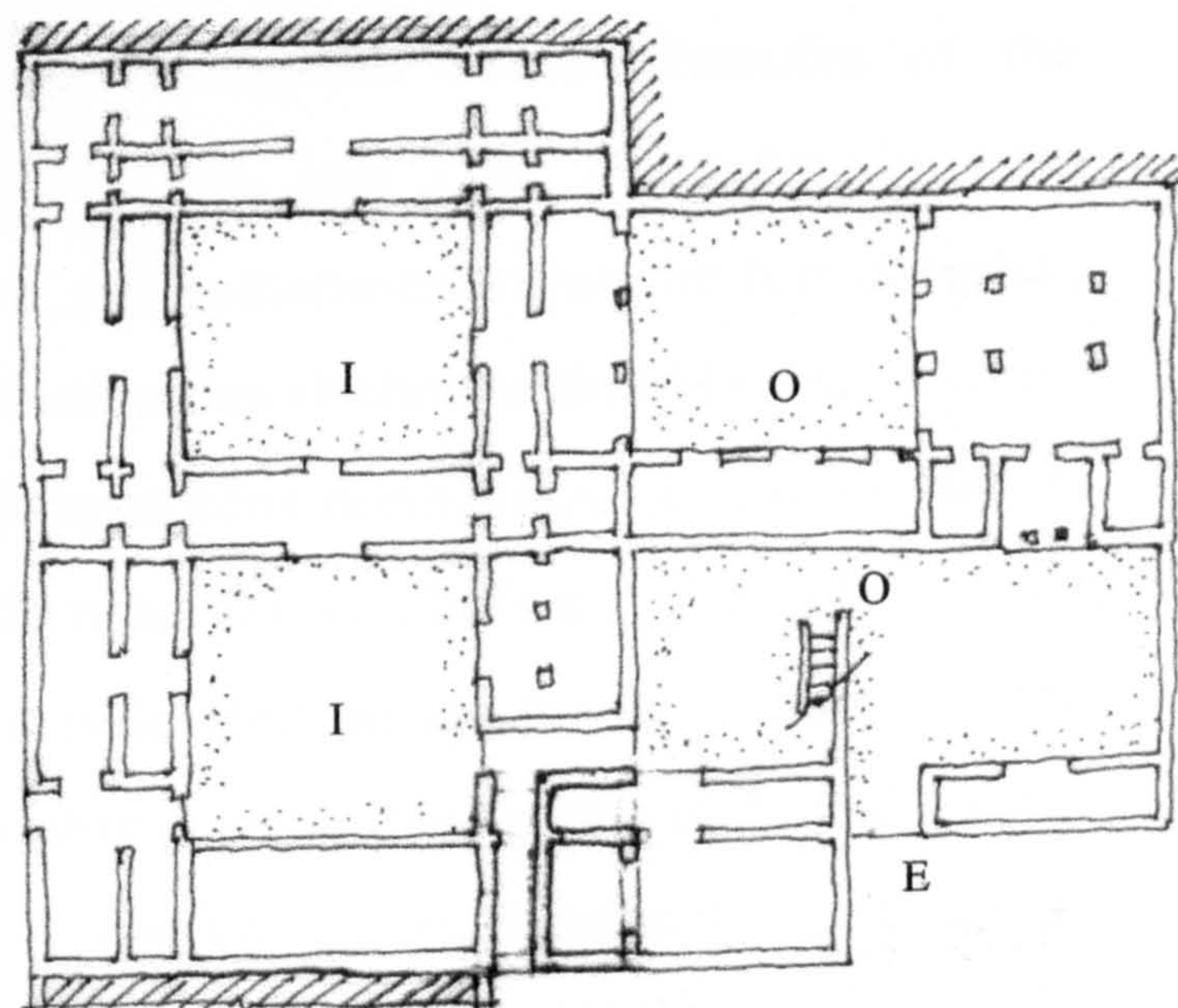
Rajpurohit Haveli, Kishangarh,  
Merwara Region



Gosai Haveli, Sirohi,  
Godwad Region



Goram Haveli, Sirohi,  
Godwad Region



Purohit Haveli, Udaipur, Mewar Region

#### LEGEND

Entrance - E  
Inner Courtyard - I  
Outer Courtyard - O  
Well - W

0 10' 50'

**Figure 3.6 b - Havelis of Rajpurohitis in Hadoti, Godwad, Merwara and Mewar Regions.**



Since their services were required for all types of ceremonies, their *havelis* were usually located close to the King's Palace. At times, their political role was camouflaged in the religious paraphernalia. The ruler consulted the royal priest about all major decisions in the city to assure himself of the auspicious aspect of a decision. There is a story about the *rajpurohit* Bhatt Rajaji who replaced the Rajput ruler and sat on the Jaipur throne for two days to donate a number of cattle and quantity of gold to other *Brahmins* in order to avoid a catastrophe on the King (hence, the title *Rajaji* meaning ruler). The Amber and Brahmapuri areas of Jaipur in Dundhar region have maximum number of Brahmin *havelis*. These belong to the priests who were specifically called to perform the *Yajna* ceremony for establishing Jaipur as the capital. Some examples of the *Rajpurohit havelis* are shown in Figure 3.6a. and 3.6b. These *havelis* were located right next to the fort or palace, and sometimes within the fort complex, as in Jaisalmer. The religious texts mention that Brahmins should have a 'white' site, which indicates that the first preference considering location and orientation should be given to Brahmin houses. In most cases, it is found that these *havelis* have a square court and the entrance is located on the North or East in most cases. They are normally single or double court. Although the male and female sections are separate, but no *purdah* is observed by the females. Majority of the Brahmin *havelis* had direct entrances with no baffle wall. Inside spaces like *baithak* were not as elaborate as found in the *havelis* of other castes and entertainment spaces like *rangmahal*, *sheesh mahal* etc. are never found in a Brahmin *haveli*. The façade is less ornate as compared to *havelis* of other castes. It is modest with minimal ornamentation. The *havelis* were more open to public, since they shared a similar status as the temples. Some examples of this kind are Bhatt *Havelis* in Amber and Jaipur, Suraj *Haveli* in Jaisalmer, Rajguru's *Haveli* in Alwar and Rajpurohit's *Haveli* in Kishangarh. In some cases, these *havelis*



had paintings inside, like Pundrik *Haveli* in Brahmapuri, Jaipur, Bade Devta *Haveli* in Kota, and Bhatt *Haveli*, Amber. In rare cases, these would be multicourt *havelis* like Purohit's *Haveli* in Ganesh Ghatti, Udaipur. This is one of the grandest examples of a Brahmin *haveli*. The façade of the *haveli* also has a magnificent entrance gate and *chattris* on terraces. Ganesh Ghatti is located at the highest point in Udaipur city. It was a rule in Udaipur, that no *haveli* could be higher than the palace, but the *chattris* of Purohit's *Haveli* are the only ones that are at the same height as the palace. This can be noted as another architectural demarcation of the social hierarchy of royal Brahmins.

The second kinds of Brahmin *havelis* belong to the Brahmin ministers of the rulers). During the later period (after 1750 A.D.), with an intermixing of caste and occupation, a number of *Brahmins* had significant political positions such as Pandit Shivdin, who was the Prime Minister to the Jaipur ruler and Balbaksh Sharma (owner of Tatterkhana House) who managed the royal *tatterkhana* (water department) in Jaipur. The *haveli* complex of Tatterkhana House earlier belonged to the Modi family (Hindu traders), who were unable to pay their dues, and it was handed over to the Sharma family. This is a single family cluster with twelve single court *havelis* arranged in two rows, one on either side of the road. One of these *havelis* that housed the *mardana* is shown in Figure 3.6a. These *havelis* of Brahmin ministers had more lavish façades and could range from double to multi court complexes.

Most of the Brahmin *havelis* were constructed by the state and then donated to the Brahmins by the Rajput rulers.



## 2) The *Havelis* of the Rajput Caste (*Kshatriya* or warrior class)

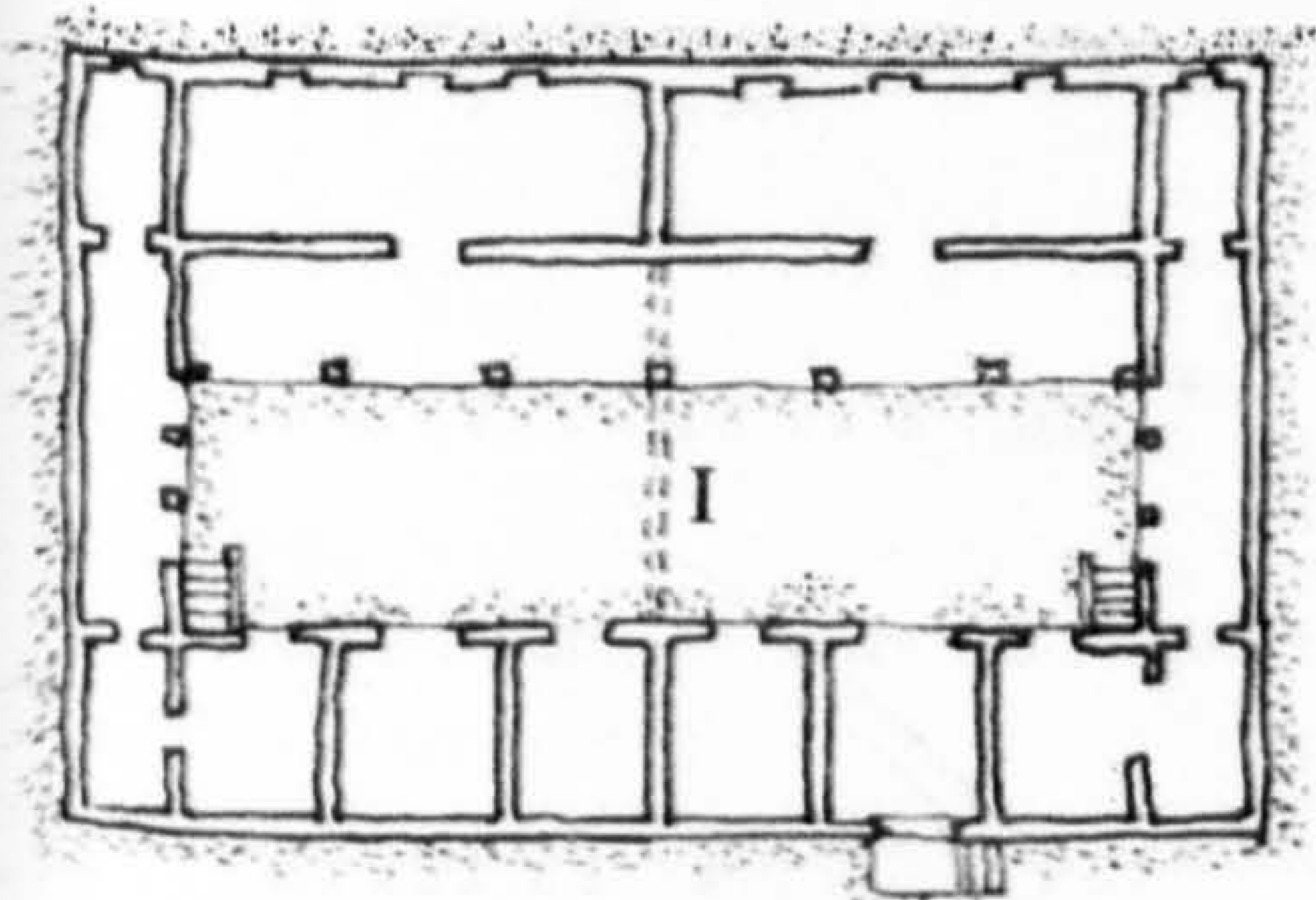
(Figure 3.7a,b,c)

Rajputs ranked second in the social hierarchy of the Hindu system. The Rajput *havelis* are also of two kinds - one that belonged to military in charge and army officials and the other kind belonging to the Rajput *thakurs*. The first kind was usually a modest *haveli* close to the ruler's abode (for immediate military protection) like Khurrewali *Haveli*, Alwar and Chauhan *Haveli*, Alwar and Mammayon *Ki Haveli* in Udaipur. Figure 3.7a shows a few examples of the *havelis* of Rajput officials.

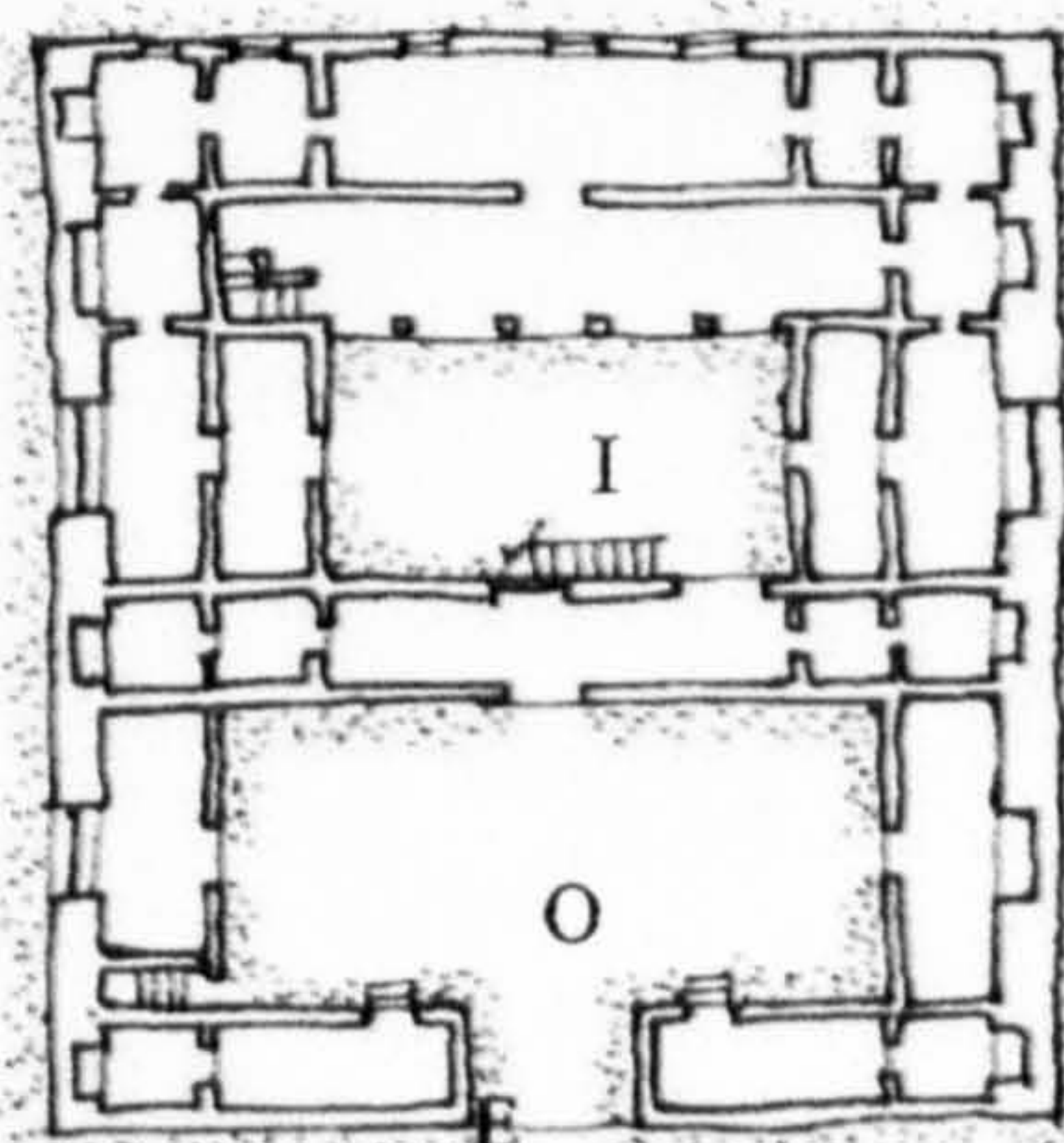
The origin of this archetype in Rajasthan was probably due to the Rajput *thakurs*. A Rajput *thakur* was the ruler of his estate or *thikana* and at par with the king. He had a palatial residence in the *thikana* (e.g. Samode Palace in Samode, Begun Fort, Begun etc.) and a grand *haveli* in the capital (Chaumoo *Haveli* and Samode *Haveli* in Jaipur, Begun *Haveli*, Udaipur etc.). Their families lived in the *thikana*. These *thakurs*, while attending the *maharaja*, lived in *havelis* in the capital.

These are grand palatial *havelis* with minimum three courts, an outside one for the servants and stables, *mardana* for the men to receive guests and hold *darbar* and an innermost one or the *zenana* for the women. The *baithak* or sitting area of a Rajput *haveli* was usually elaborate and used for holding meetings like a ruler's *darbar* or court. These *havelis* had lavish spaces comparable to the ones found in the palaces such as *Diwan-i-aam*, *Diwan-i-Khas* and *Naqqarkhana* etc. In an interview with Jitendra Shekhawat (descendent of the Kachariyawas *thikana* of Jaipur), it was found that *purdah* was strictly observed in this class.

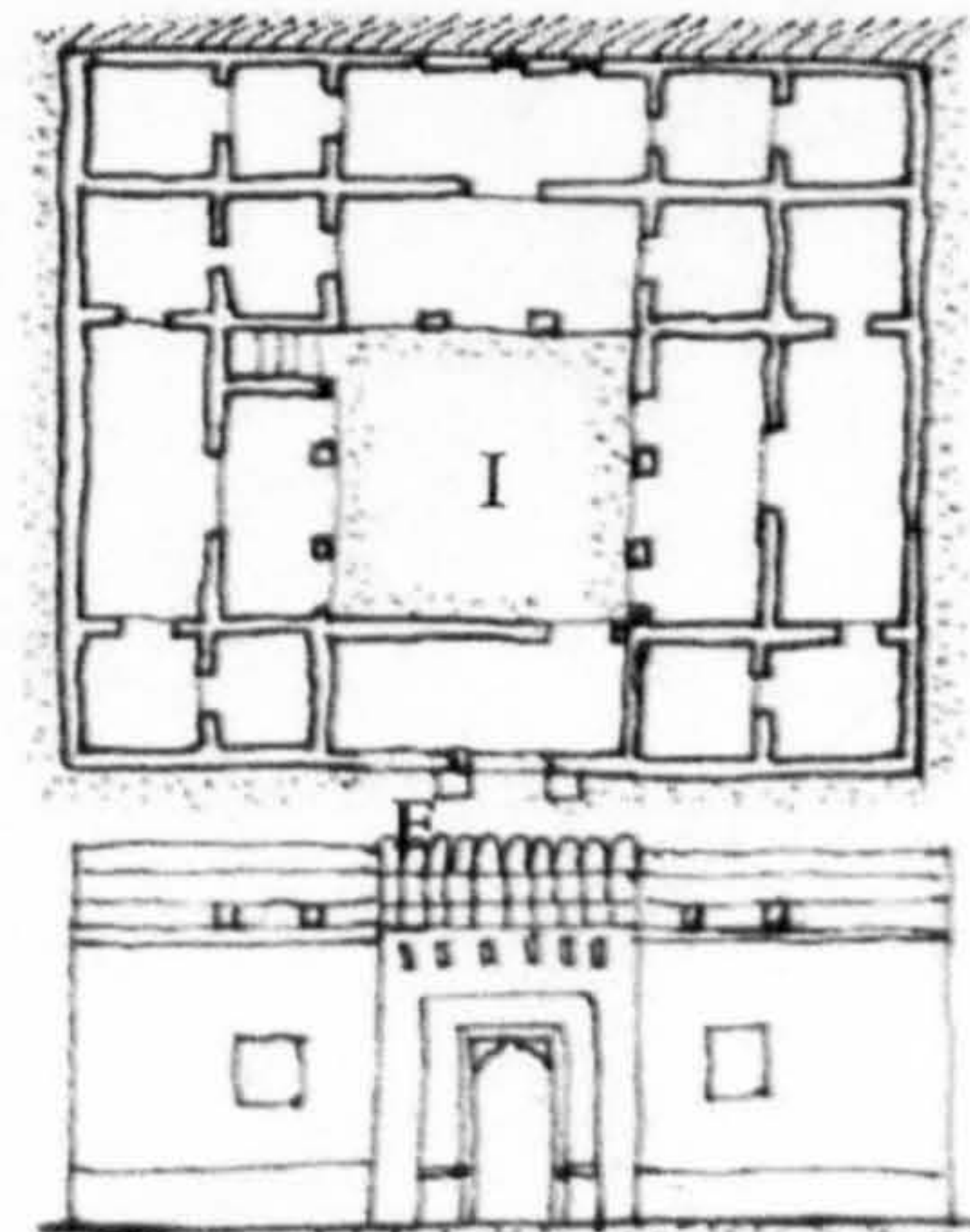




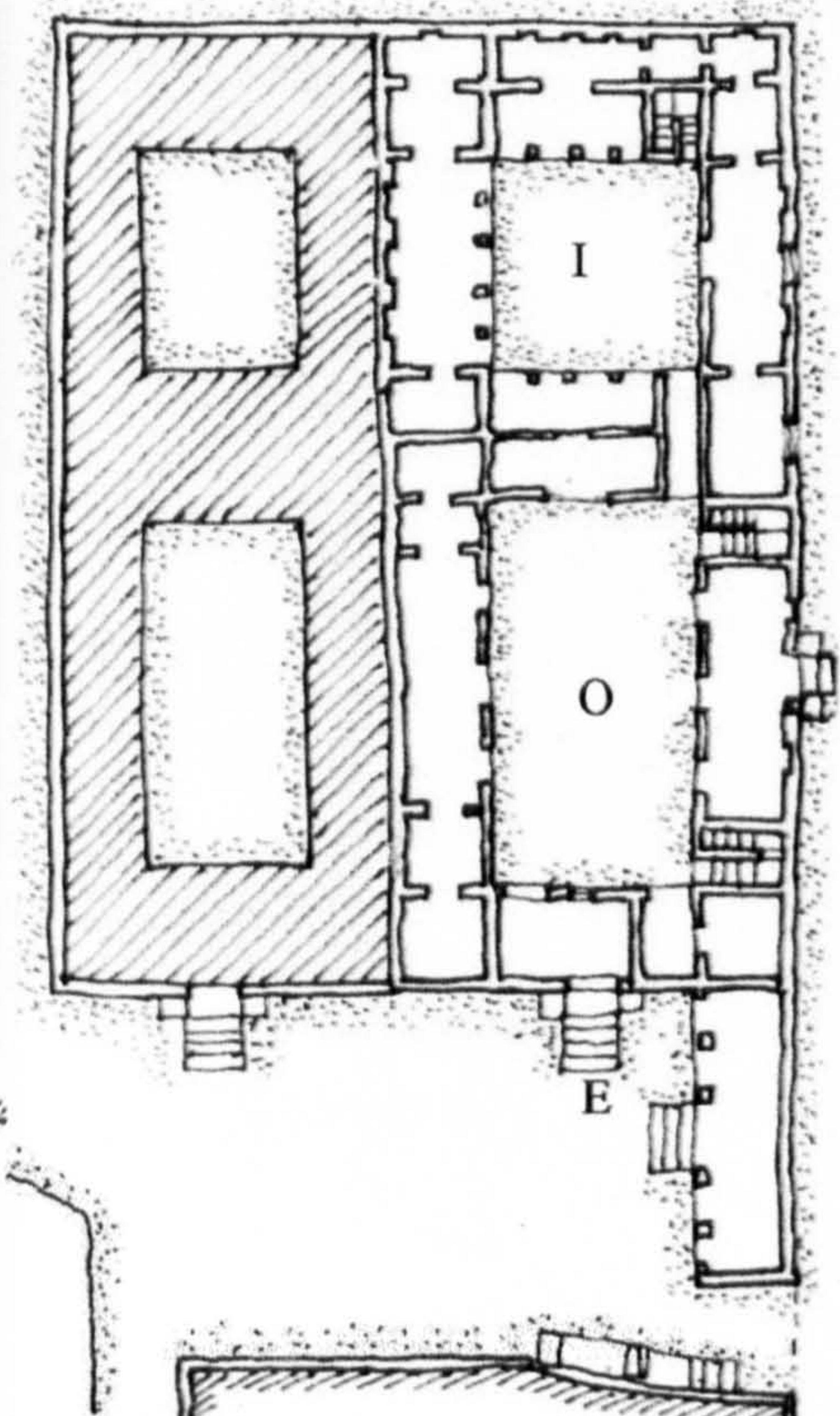
Ghugha Haveli, Dungarpur, E Vagad Region



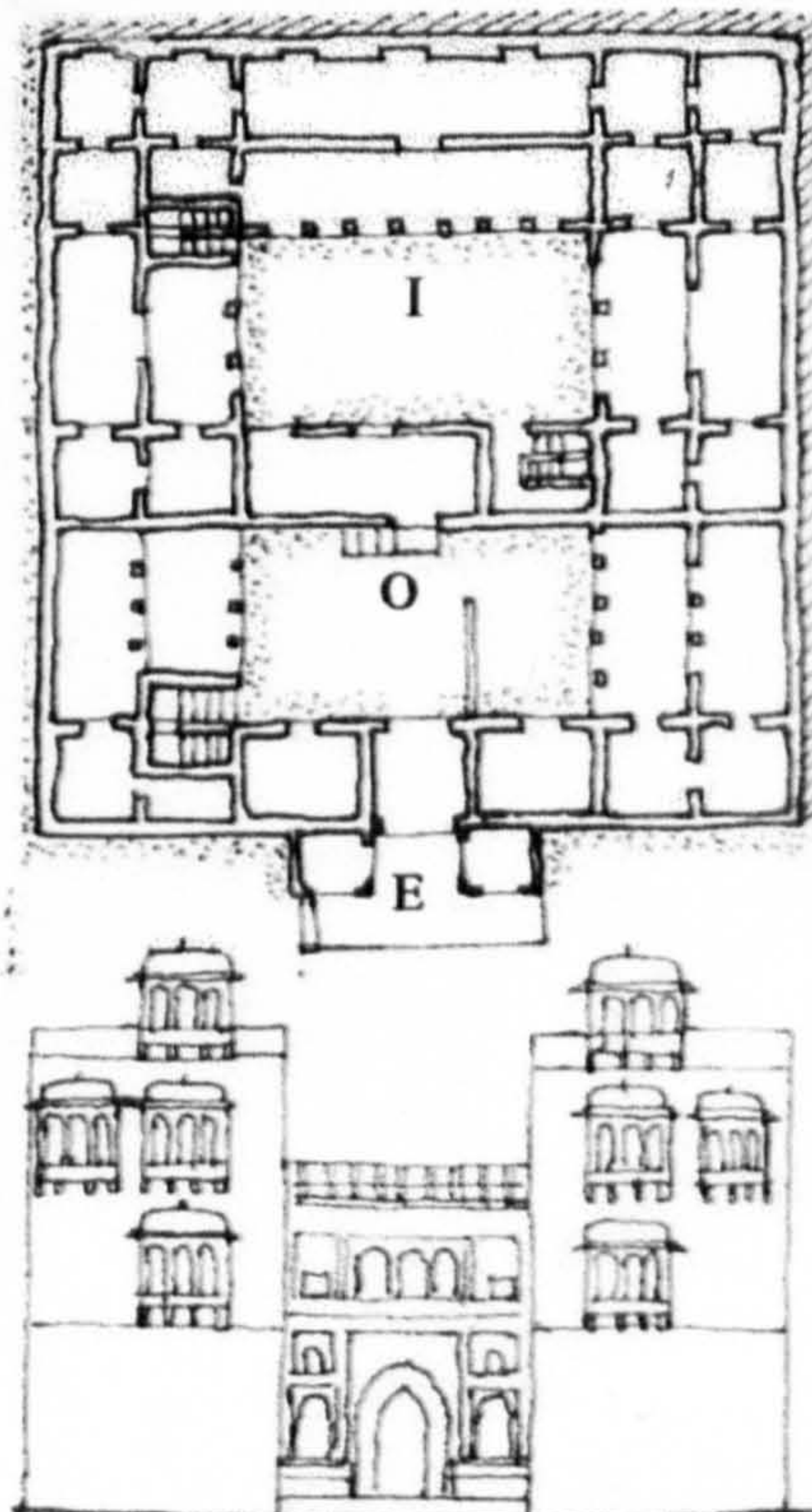
Mammayon Ki Haveli, Udaipur, Mewar Region



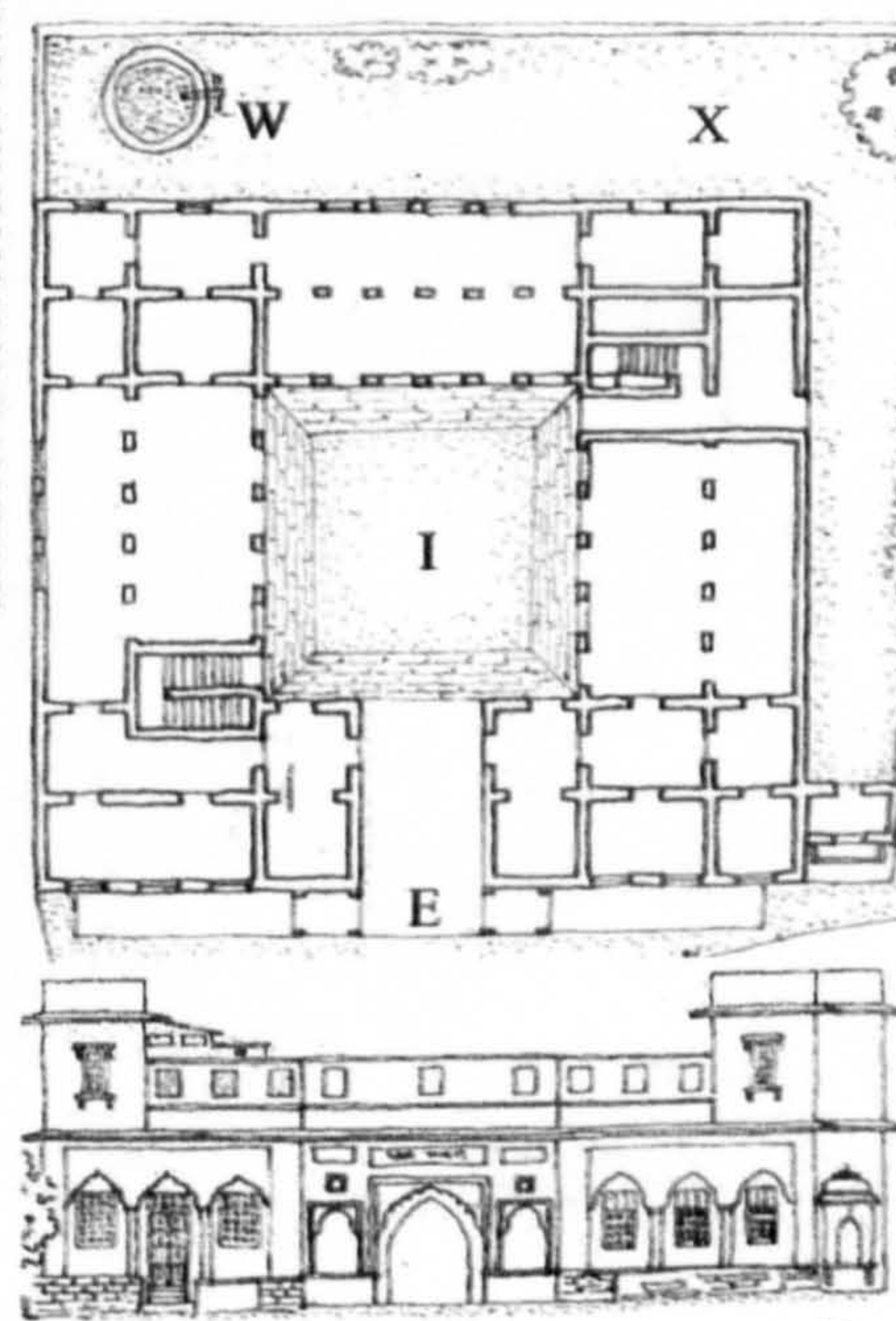
Haveli, Bassi, Mewar Region



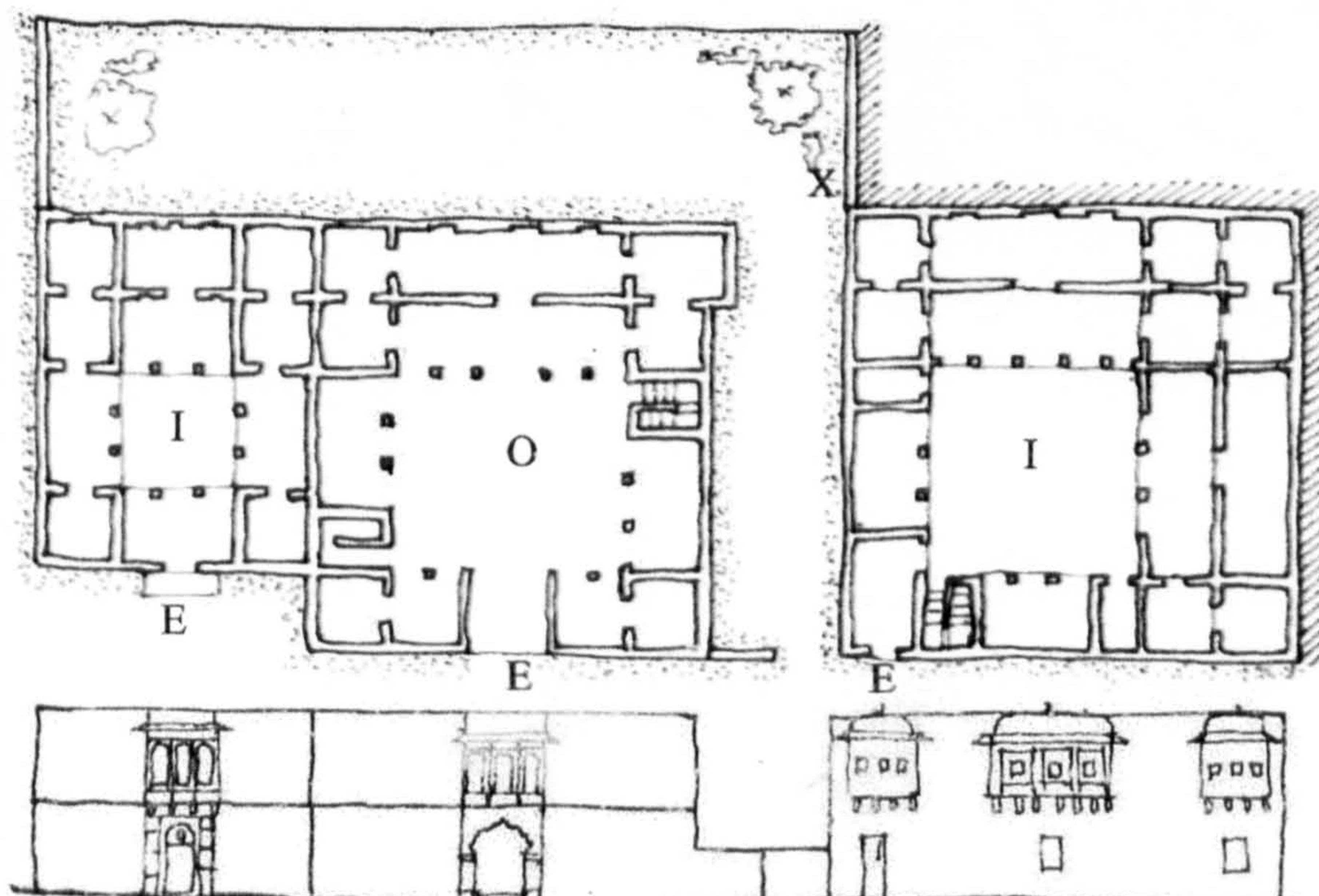
Diwanon Ki Haveli, Kishangarh, Merwara Region



Jhaji Khan Haveli, Alwar, Mewat-Brij Region



Chatra Bhavan, Jhalawar, Hadoti Region



Khurrewali Haveli, Alwar, Mewat-Brij Region

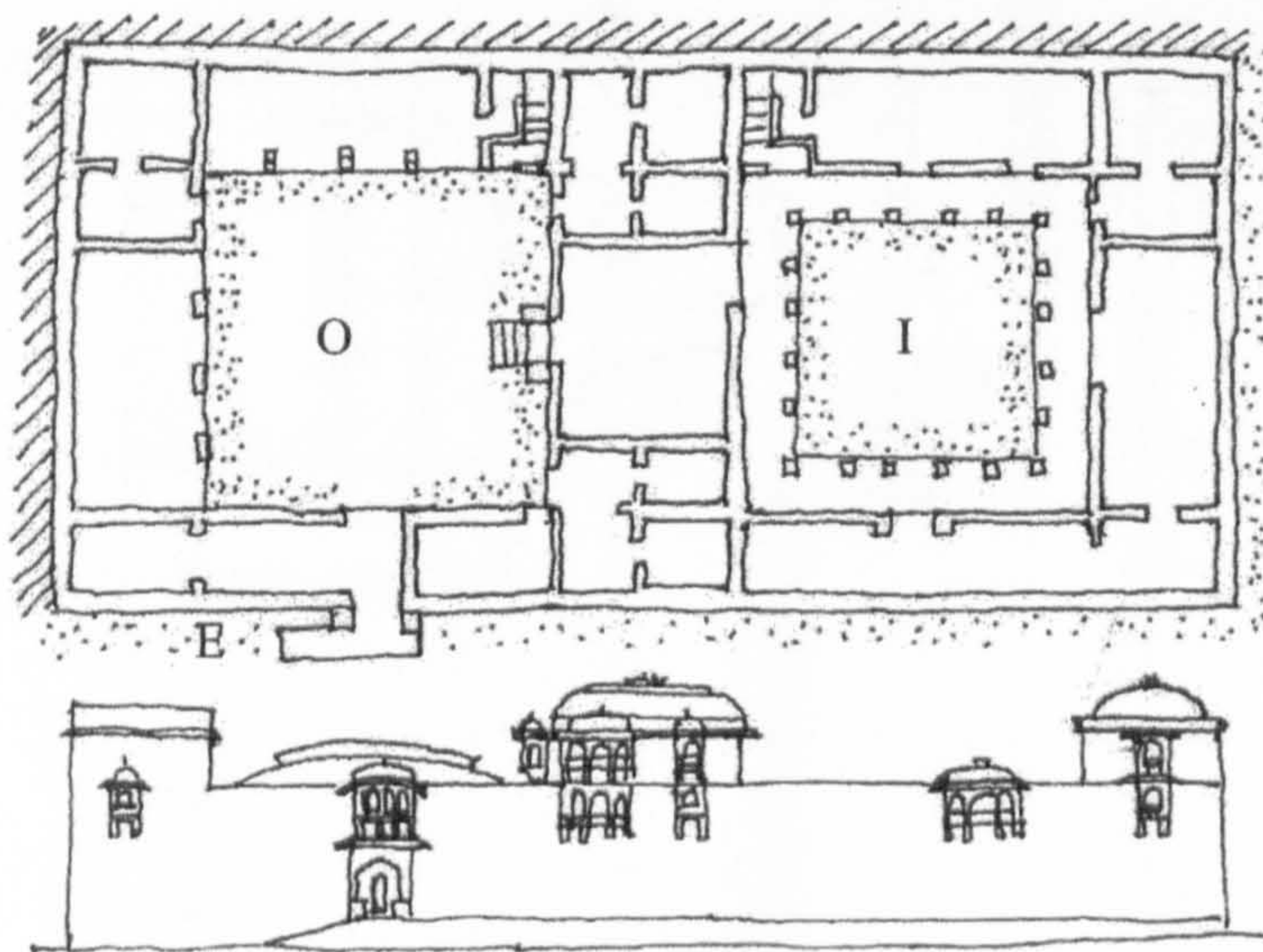
#### LEGEND

Entrance - E  
Inner Court - I  
Outer Court - O  
Well - W  
Annexe Area or Nohra - X

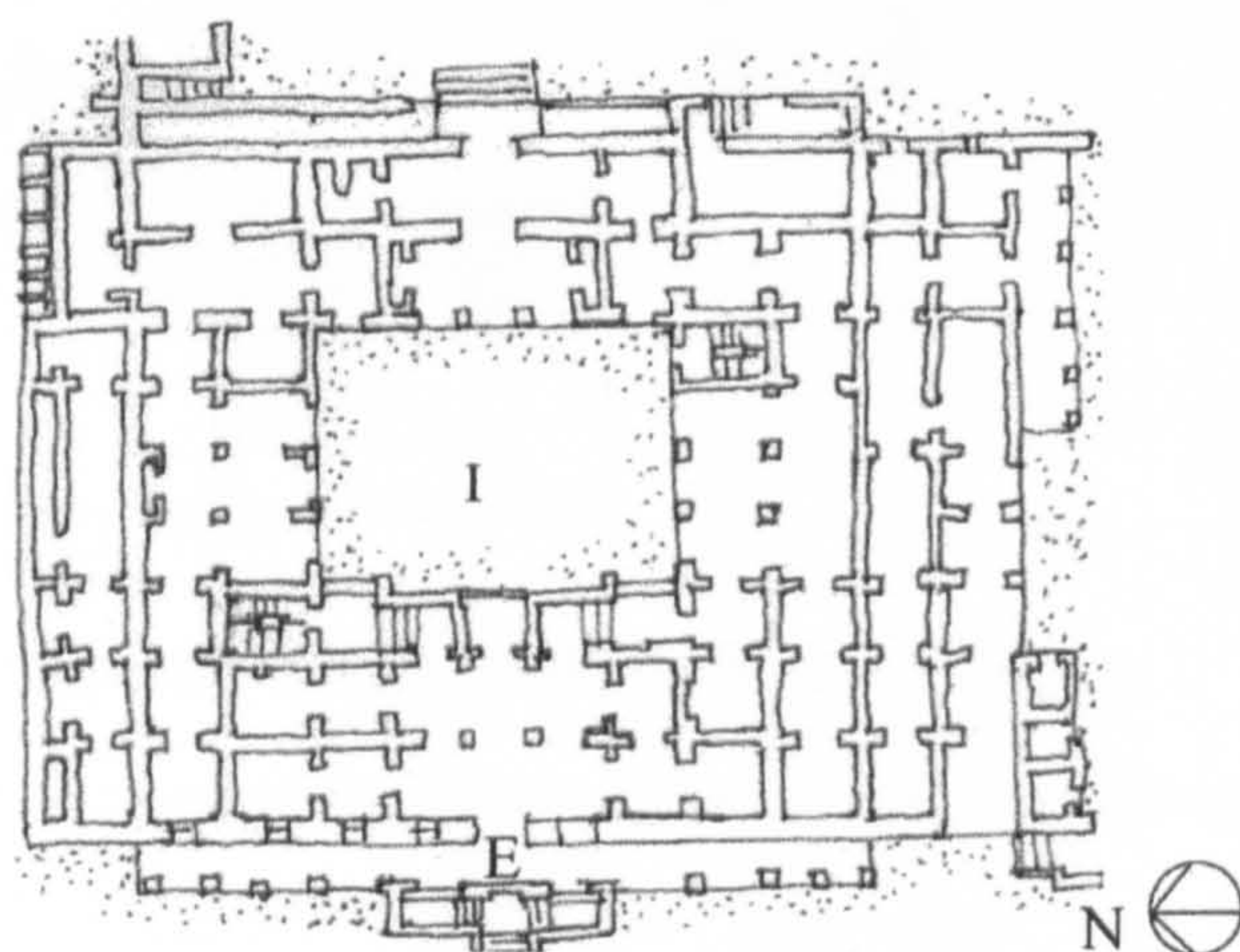
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Figure 3.7 a - Havelis of Rajput Officials in different regions of Rajasthan

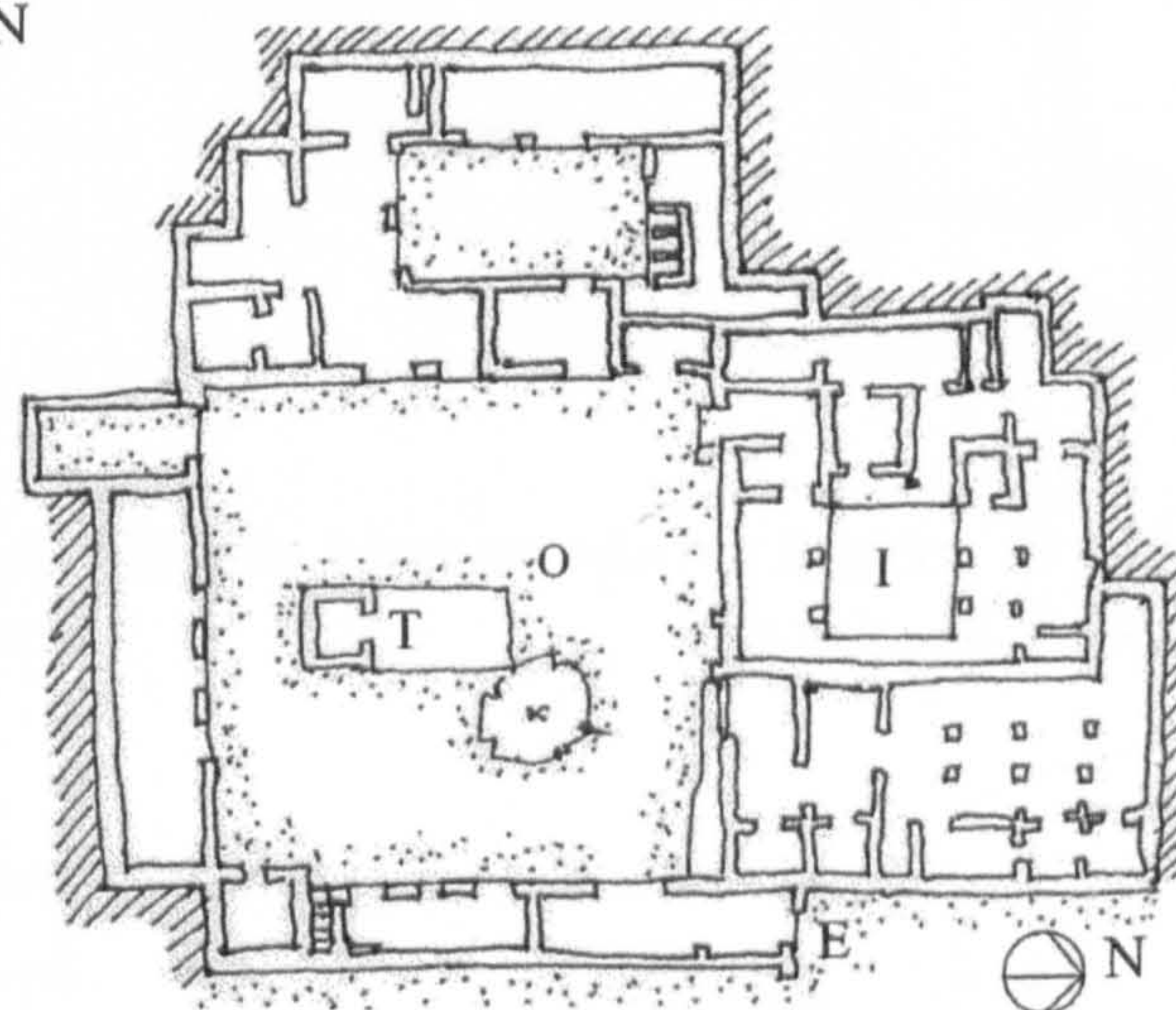




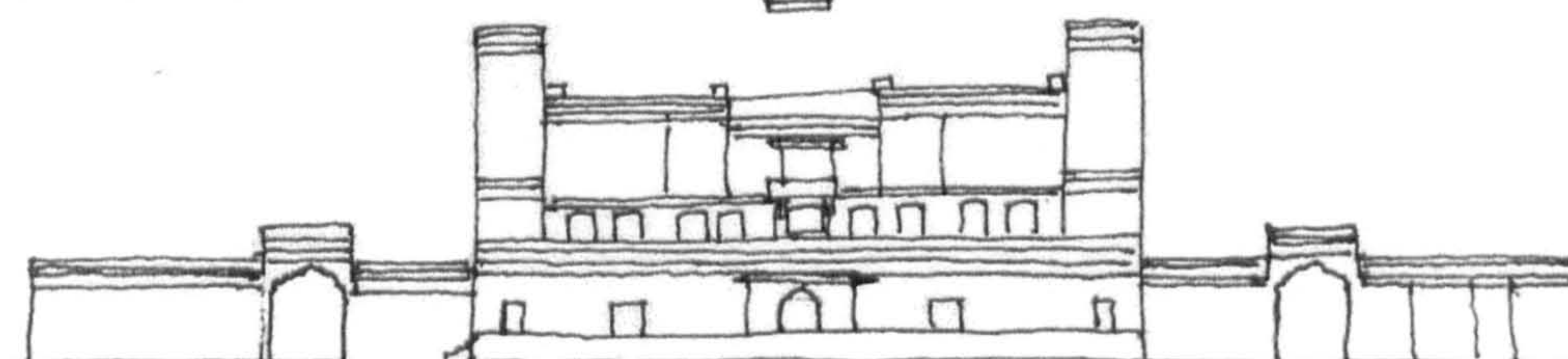
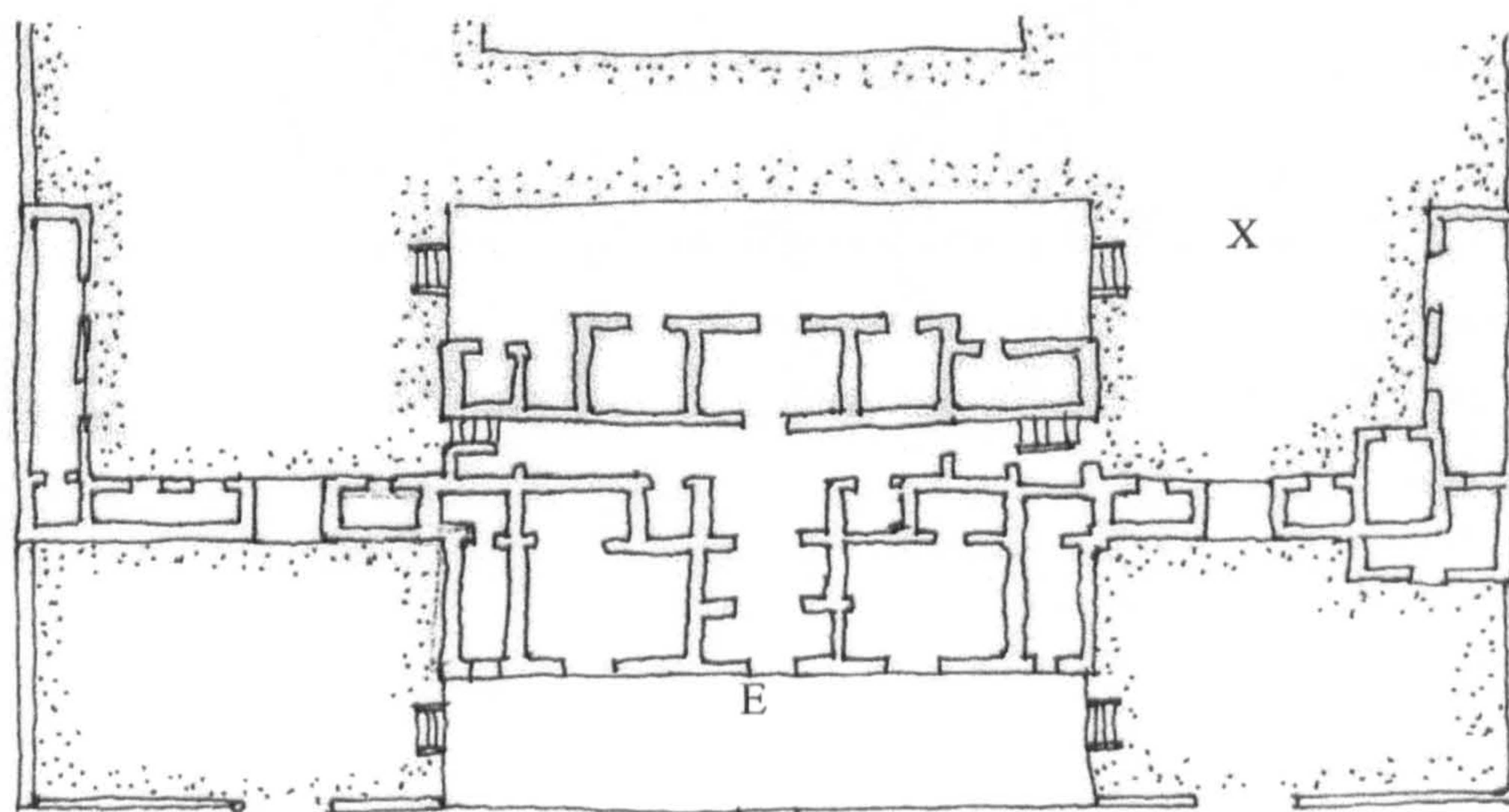
Chaumoo Haveli, Amber, Dundhar Region



Chaumoo Haveli, Jaipur, Dundhar Region  
(From Ajay Khare, Architect)



Bhawani Singh Haveli, Bundi, Hadoti Region  
(From B.Arch. Dissertation, C.E.P.T., Ahmedabad)



Chaumoo House, Jaipur, Dundhar Region

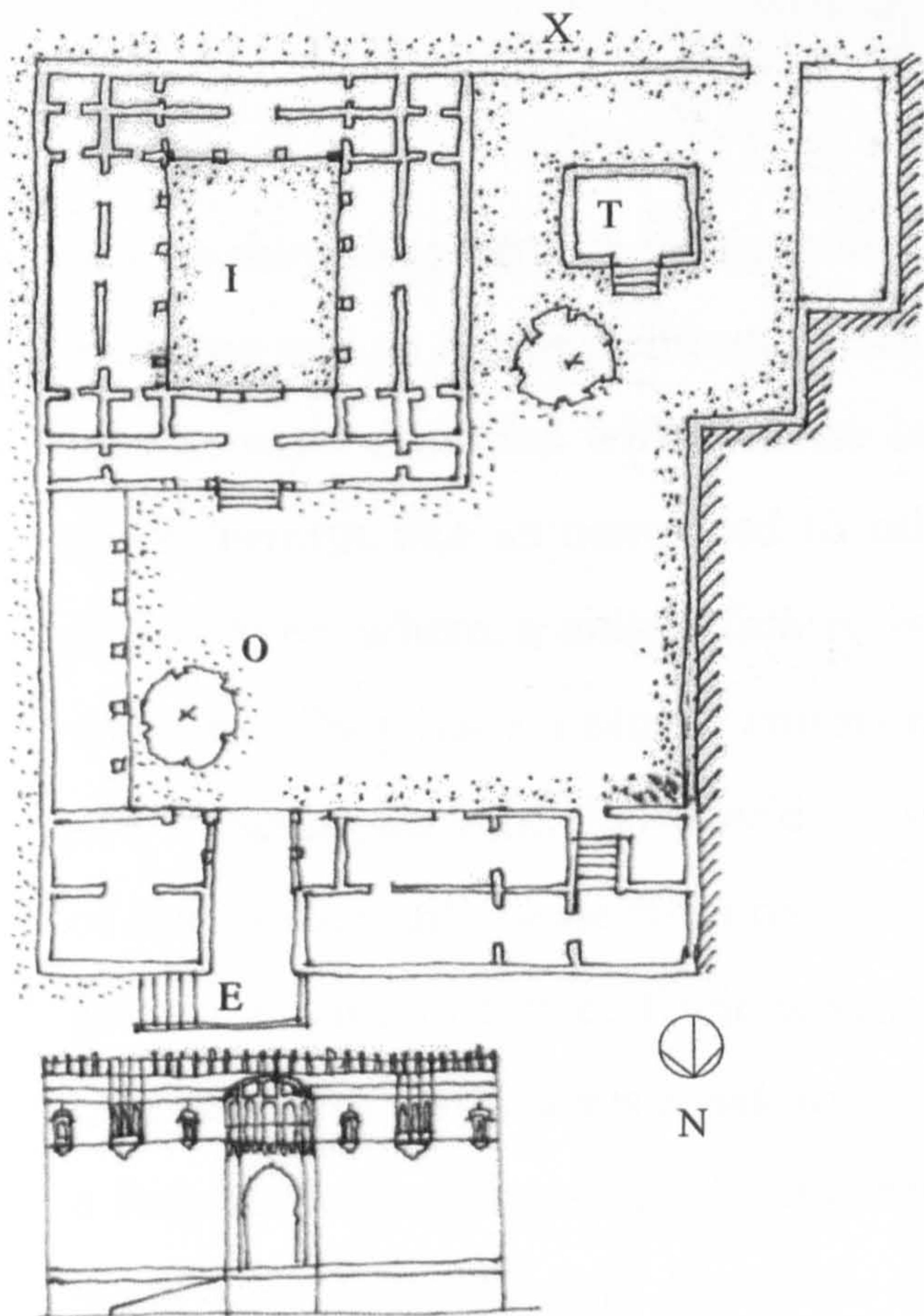
#### LEGEND

- Entrance - E
- Inner Courtyard - I
- Outer Courtyard - O
- Temple/ Masjid - T
- Annexe area/Nohra - X

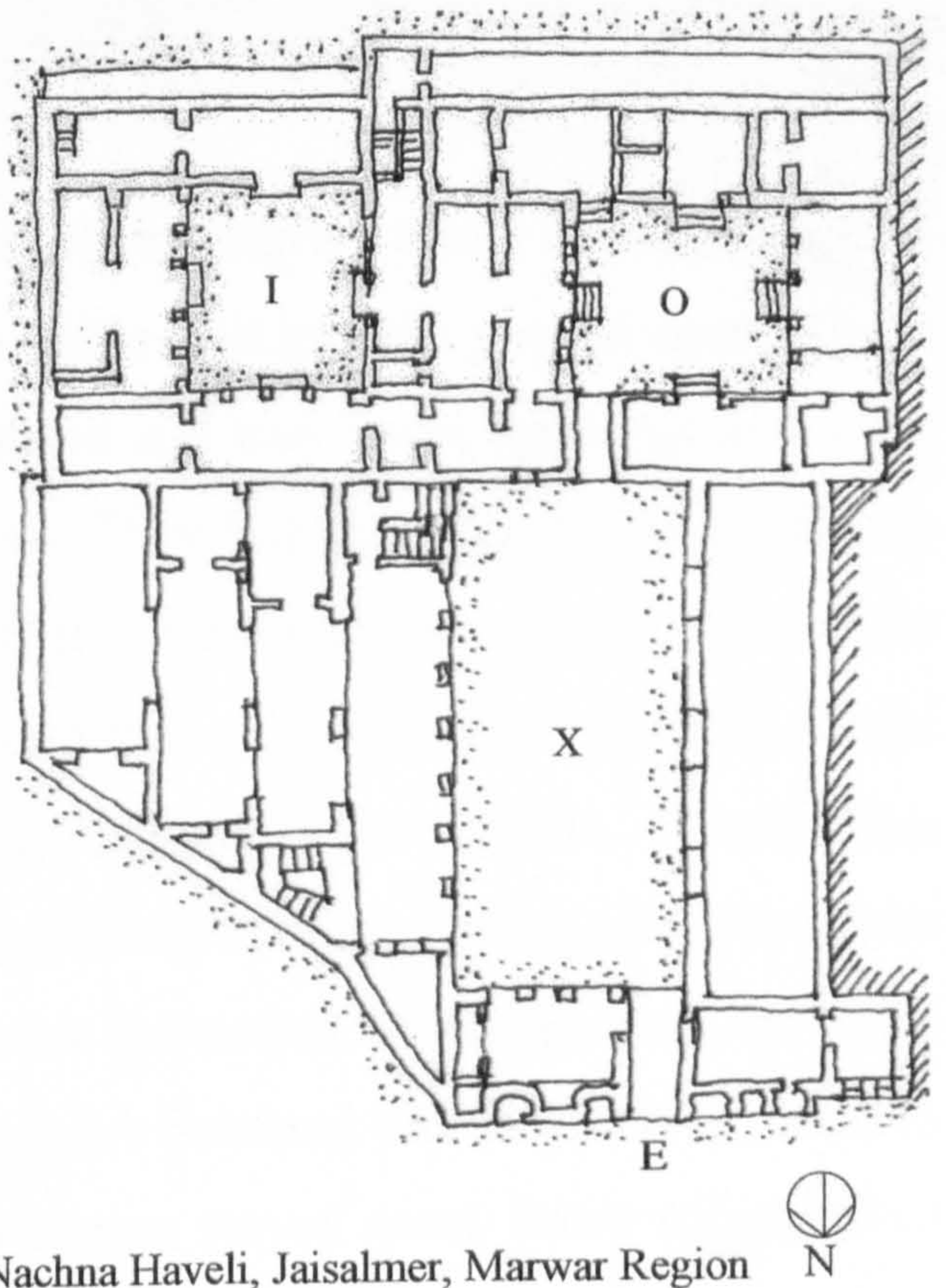
0 10' 50'

**Figure 3.7 b - Havelis of Rajput Thakurs in Dundhar and Hadoti Region**

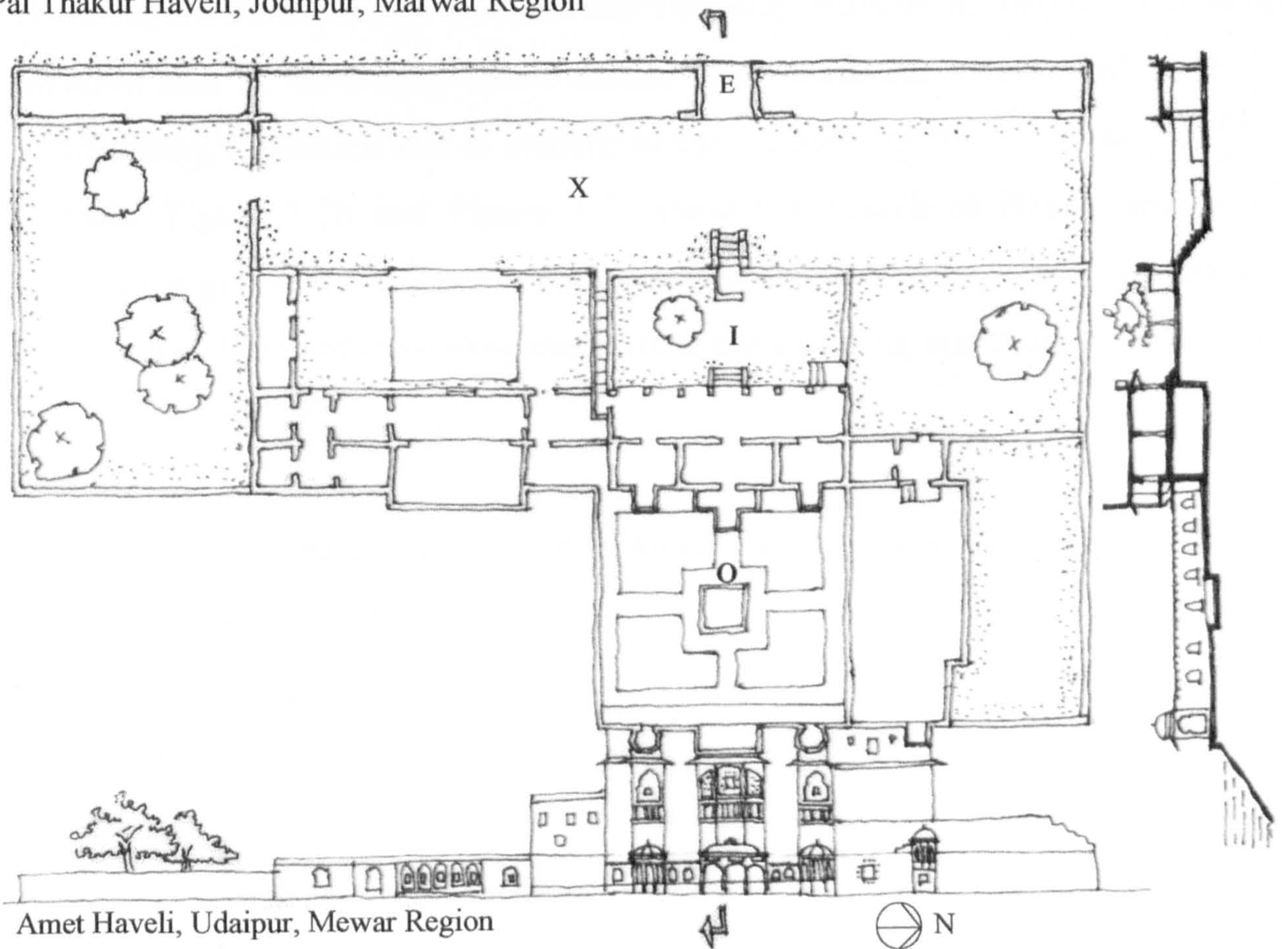




Pal Thakur Haveli, Jodhpur, Marwar Region



Nachna Haveli, Jaisalmer, Marwar Region



Amet Haveli, Udaipur, Mewar Region

#### LEGEND

Entrance - E Inner Court - I Outer Court - O Temple - T Annexe area / Stables - X

0 10' 50'

Figure 3.7c - *Havelis of Rajput Thakurs in Marwar and Mewar Regions*



Due to *purdah* system, the Rajput *havelis* always have a direct entrance into the *mardana* and an indirect entrance with a baffle wall into the *zenana* court. These *havelis* were designed with defense in mind and had fewer openings and were more fortress like as compared to others. They belonged to the single-family cluster type where a single family with its infrastructure occupies the whole complex. They have a bigger entrance gate than other *havelis* called the '*Hathi pol*' meaning the kind that would allow an elephant to enter inside. The families of *thakurs* actually came from the younger brothers of the Rajput ruler who were given land at a distance. Their *havelis* were located at a distance from the royal court as there was always a risk to the ruler. A fraternal cluster is never found in a Rajput *thakur's haveli* as the brothers always stayed apart. Some examples of these *havelis* are Nachna *Haveli* in Jaisalmer, Pal *Thakur's Haveli* in Jodhpur, Jhala *Haveli* in Kota and Shekhawati *Thakurs' Havelis* in Jaipur. The texts mention that a *Kshatriya* house should use maximum amount of stone for fortification, a practice that is evident in the massive fortress like *havelis* of the Rajputs. Figure 3.7b and Figure 3.7c show the *havelis* of Rajput *thakurs* in different regions of Rajasthan. Chaumoo House in Figure 3.7b is a twentieth century development indicating the shift of the dwelling unit from the courtyard pattern to the bungalow type.

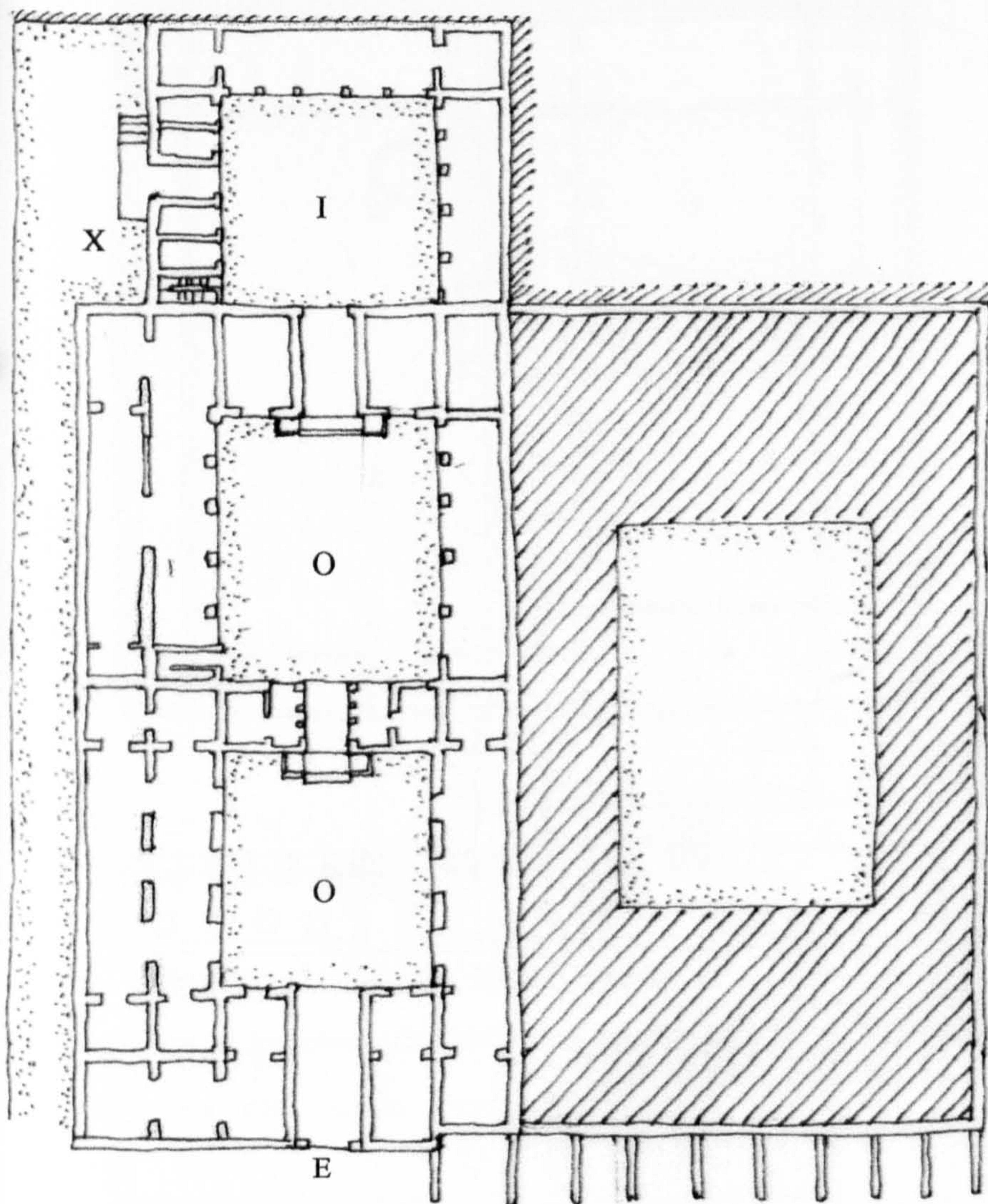
### **3) The *Havelis* of the Hindu Merchants or Marwaris (*Vaishya* or trader class) (Figure 3.8 a,b,c,d)**

If the Rajputs were responsible for the origin of the *haveli* form, the Marwaris (trader class) can be credited for the maximum evolution of this form. The term 'Marwari' comes from the region of Marwar, as this trader class hailed from this region. In Rajasthan, the maximum number of *havelis* are built and owned by

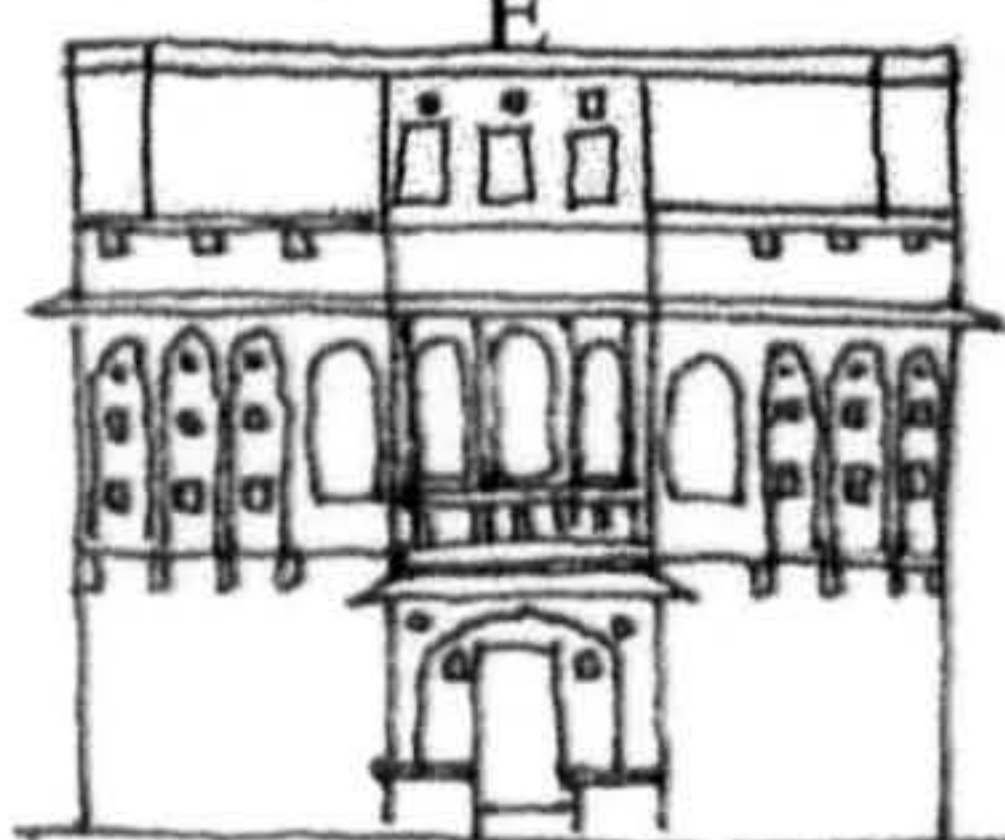
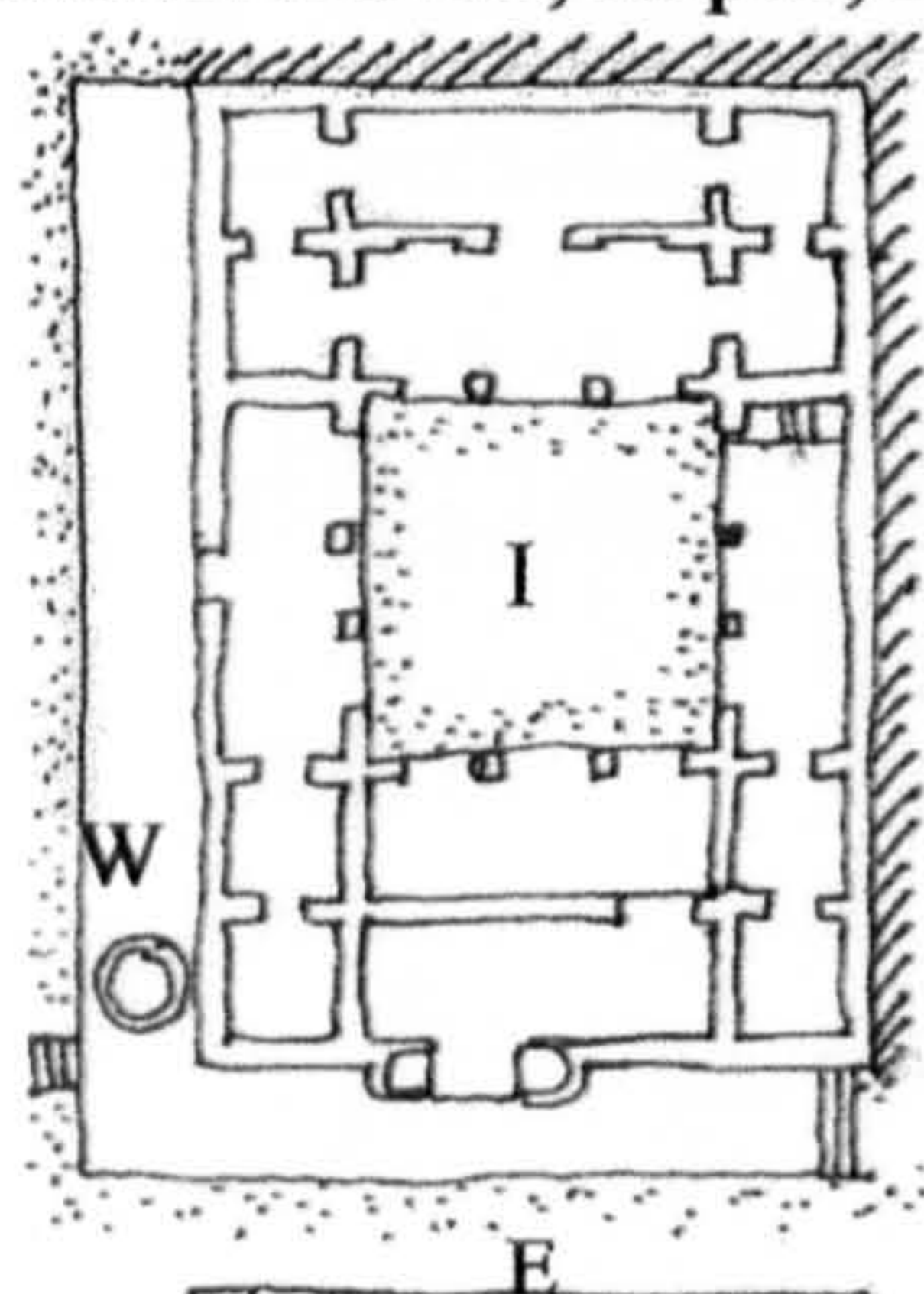
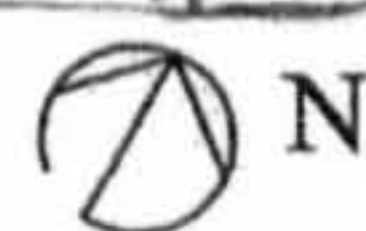


this class, hence a larger number of Marwari *havelis* are studied in the fieldwork as compared to the *havelis* of other castes. The Marwaris were always on the move from one town to another depending on which Rajput ruler gave them a greater incentive to settle in his town. The wandering inclination of the Marwaris resulted in the number of *havelis* that are spread all over Rajasthan and also other parts of India. An affluent Marwari had a number of *havelis* in a town and often had *havelis* in different towns. They were the richest class in the society and one way of showing their exuberance was to possess a number of *havelis*. Some of the affluent traders were also called '*nagarseth*' as they used to provide financial assistance to the ruler of the town. These *havelis* are located at prestigious positions on the main commercial streets. The Marwari *havelis* are most often present as fraternal clusters with a collection of single court *havelis*, each belonging to one brother opening into a common forecourt. Since all brothers of the family handled the business, it was an efficient layout. In case of smaller families, one finds single or double court *havelis*. The *baithak* in the front portion of the Marwari *haveli* served as their workspace where the accountant would sit with his *bahikhata* (accounts record). *Purdah* was not as strict as in Rajput families and the Marwari *havelis* studied in the fieldwork had both direct and indirect entrances, depending on the owner's wish. They often have an image of Lord Ganesha in a niche above the entrance. The *havelis* are richly decorated. Some of the best examples of Marwari *havelis* are in Shekhawati region of Rajasthan. And the finest example of a Marwari *haveli* is the Patwon *ki Haveli* in Jaisalmer. The façades of all Marwari *havelis* are full of ornamentation – whether it is *jali* (lattice) and stonework in Jaisalmer or paintings in Shekhawati *havelis*. In fact, this practice of ornamentation is so strongly linked to this class that even today the locals relate an overly decorated house exterior as made in 'Marwari style'.

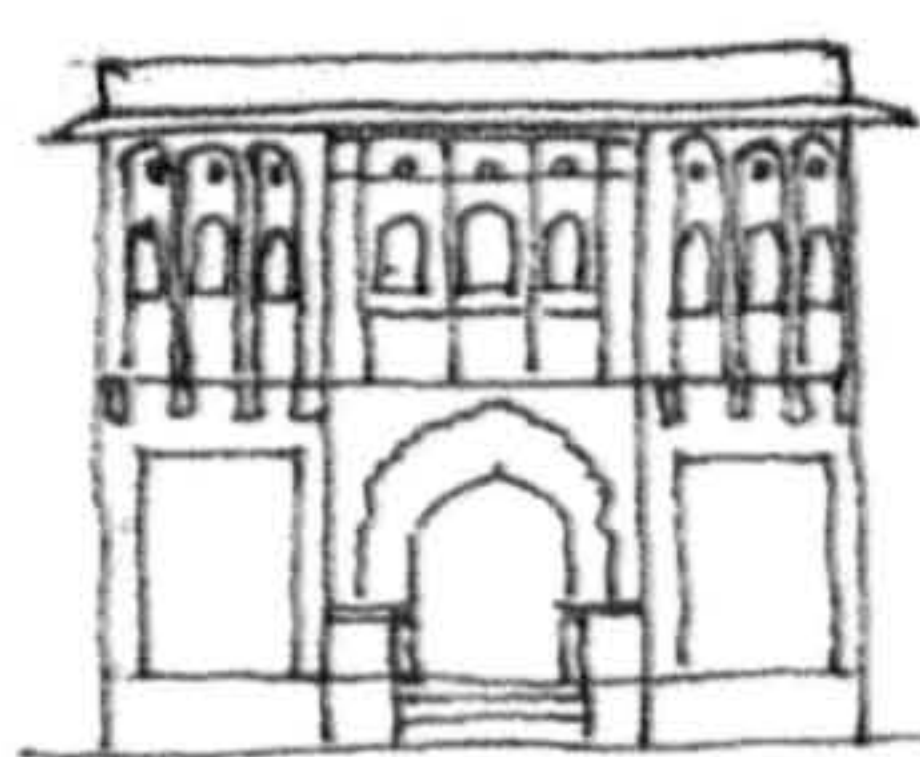
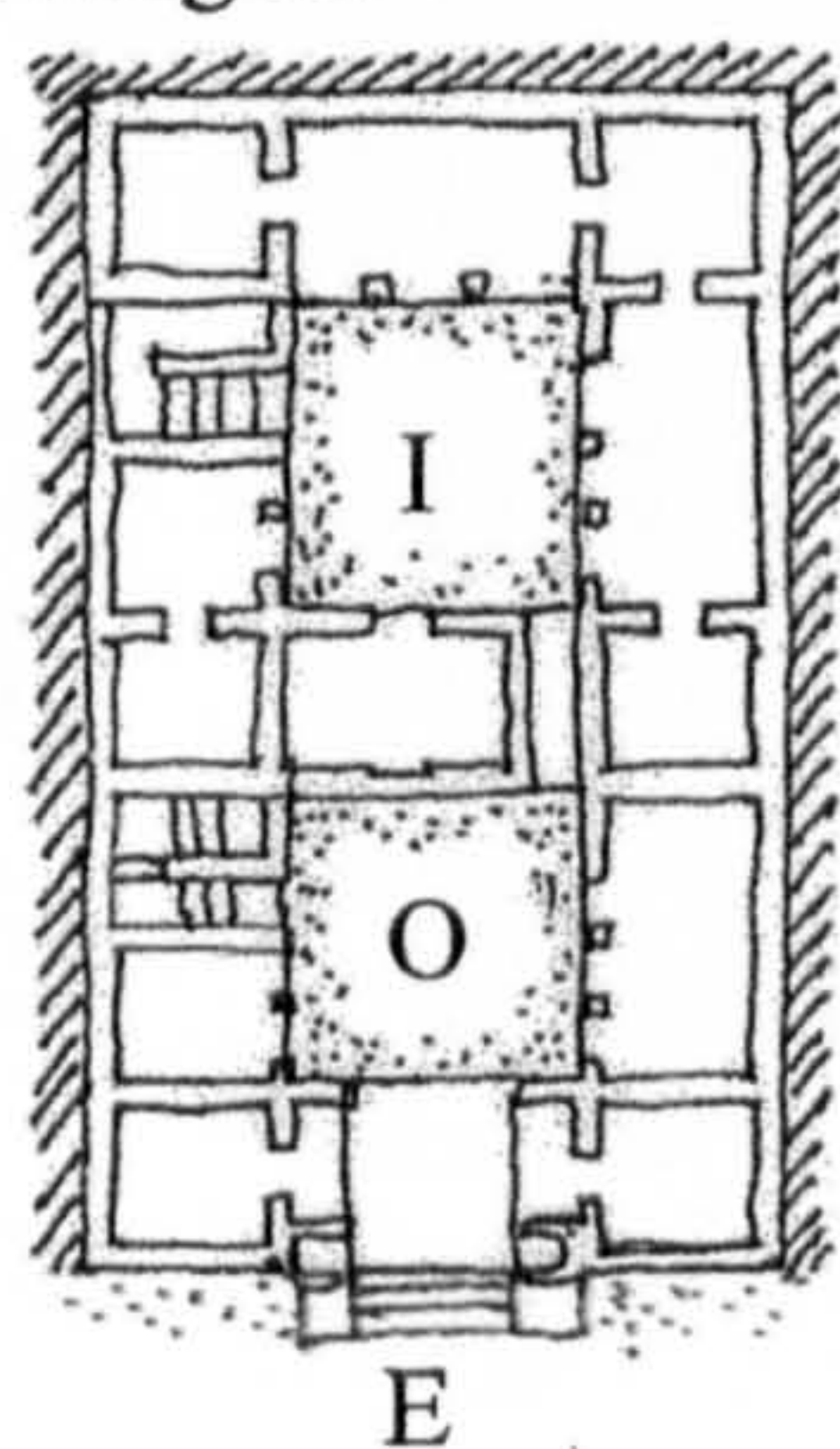




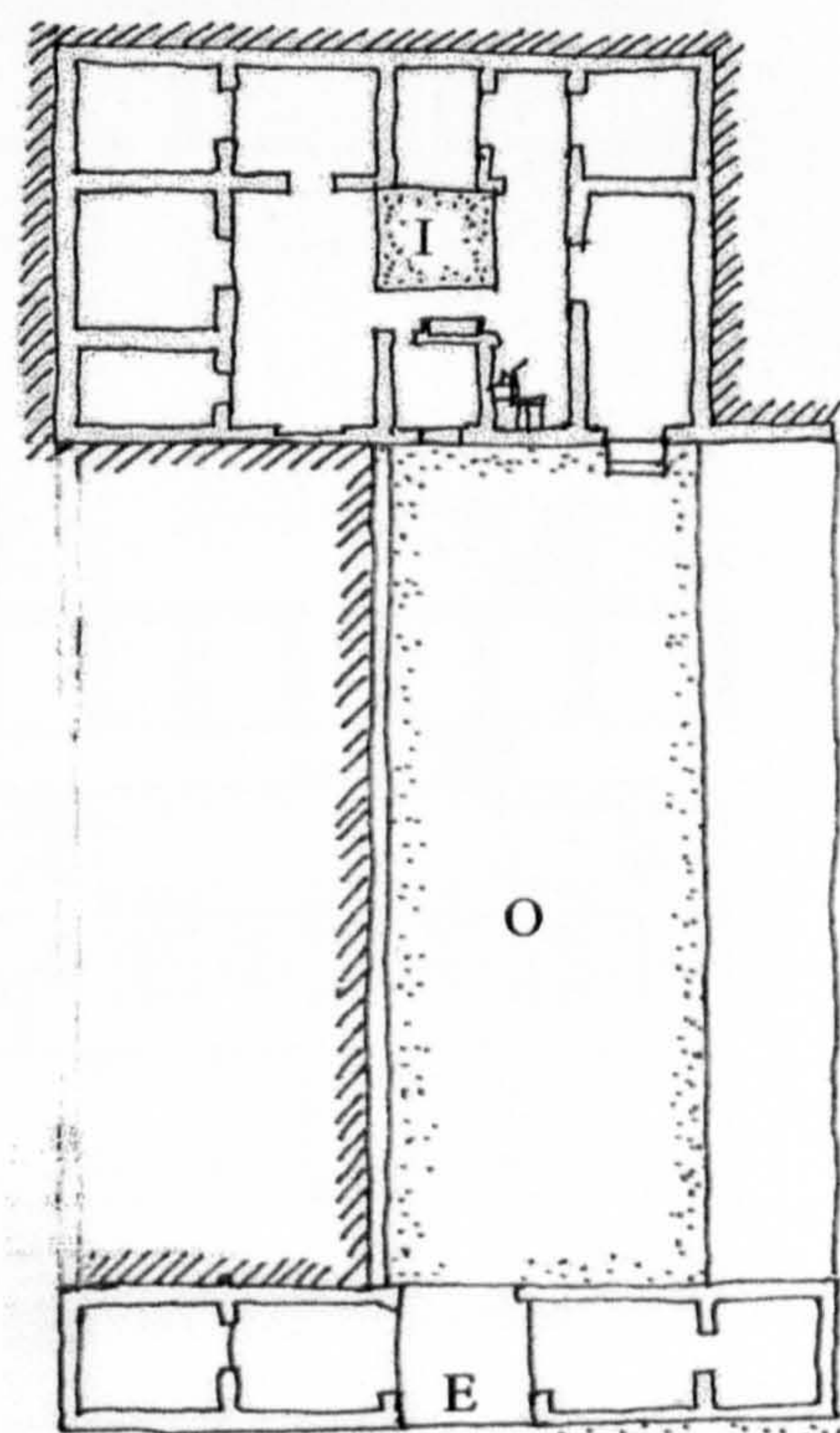
Natani Haveli, Jaipur, Dundhar Region



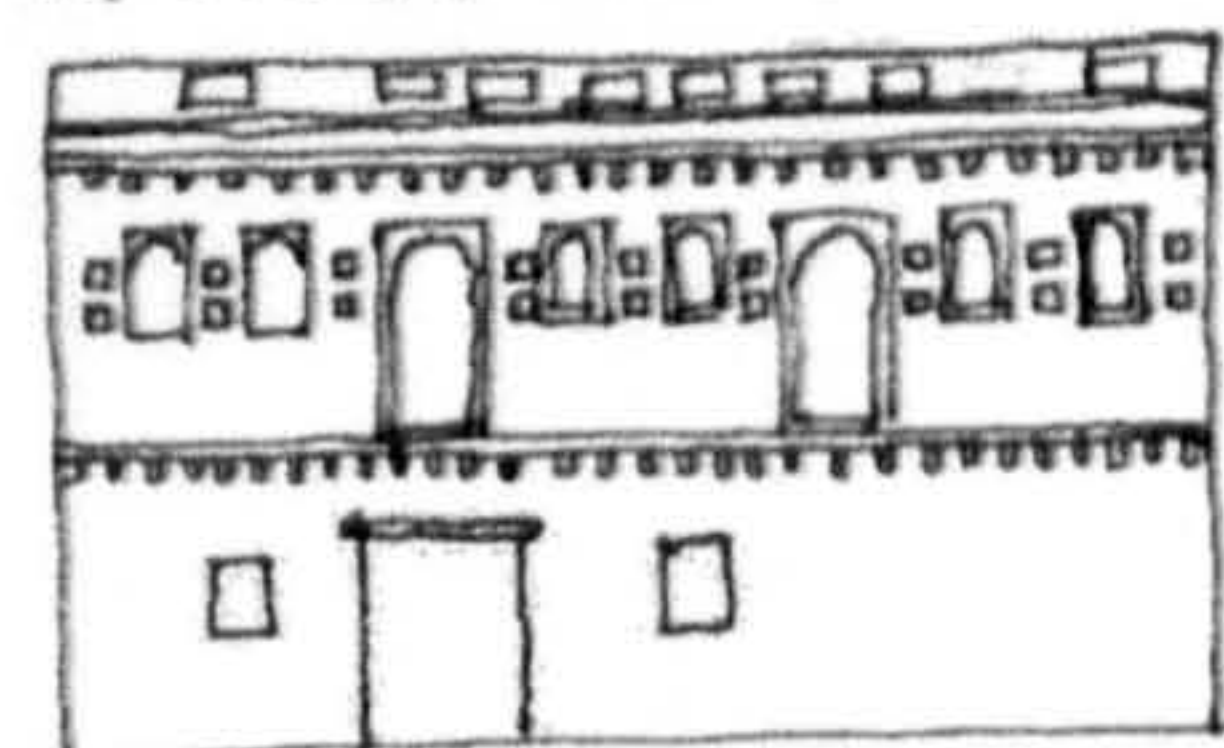
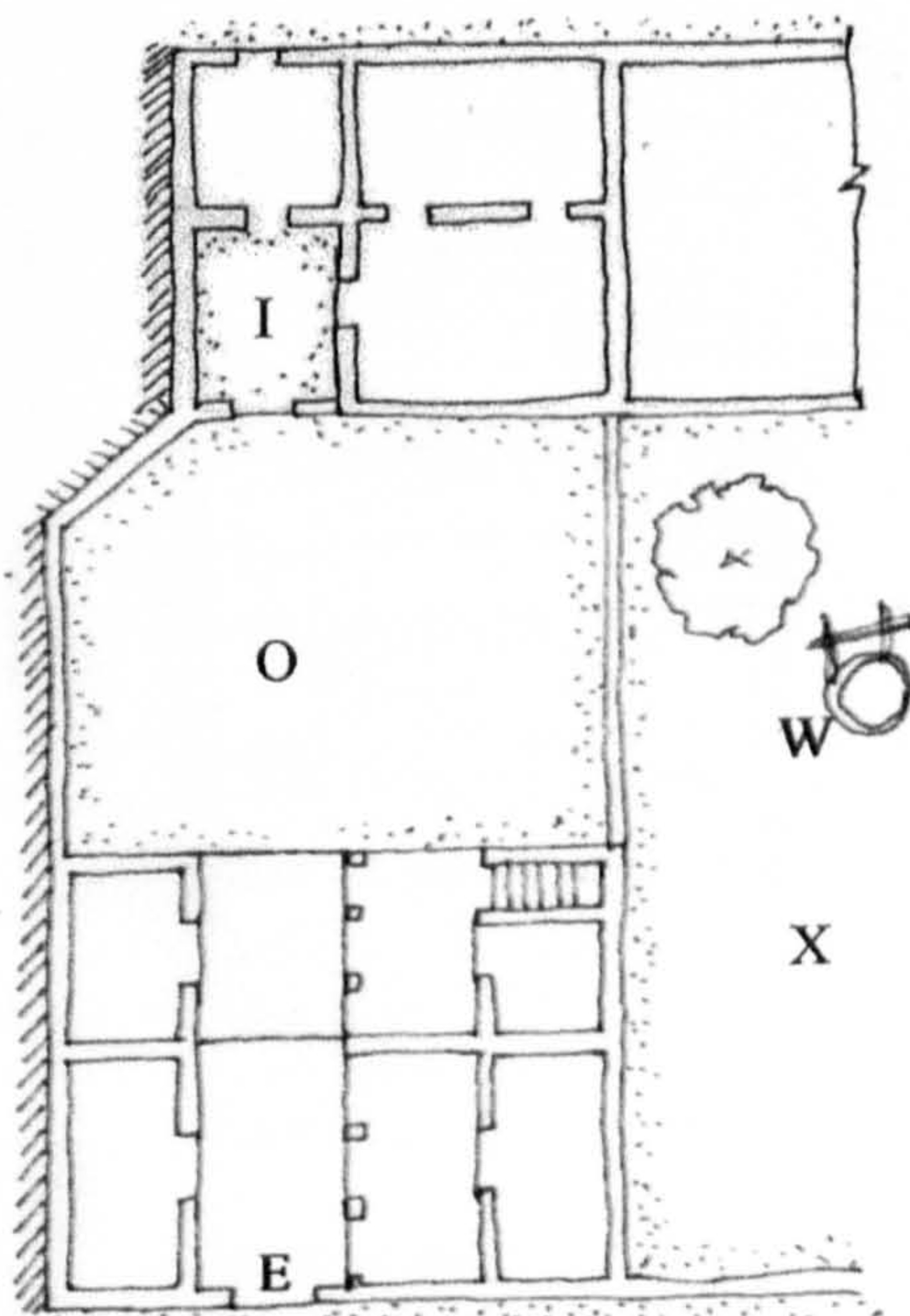
Shah Haveli, Samode, Dundhar Region



Kothari Haveli, Jaipur, Dundhar Region



Singhion Ki Haveli, Sirohi, Godwad Region



Modi Haveli, Sirohi, Godwad Region



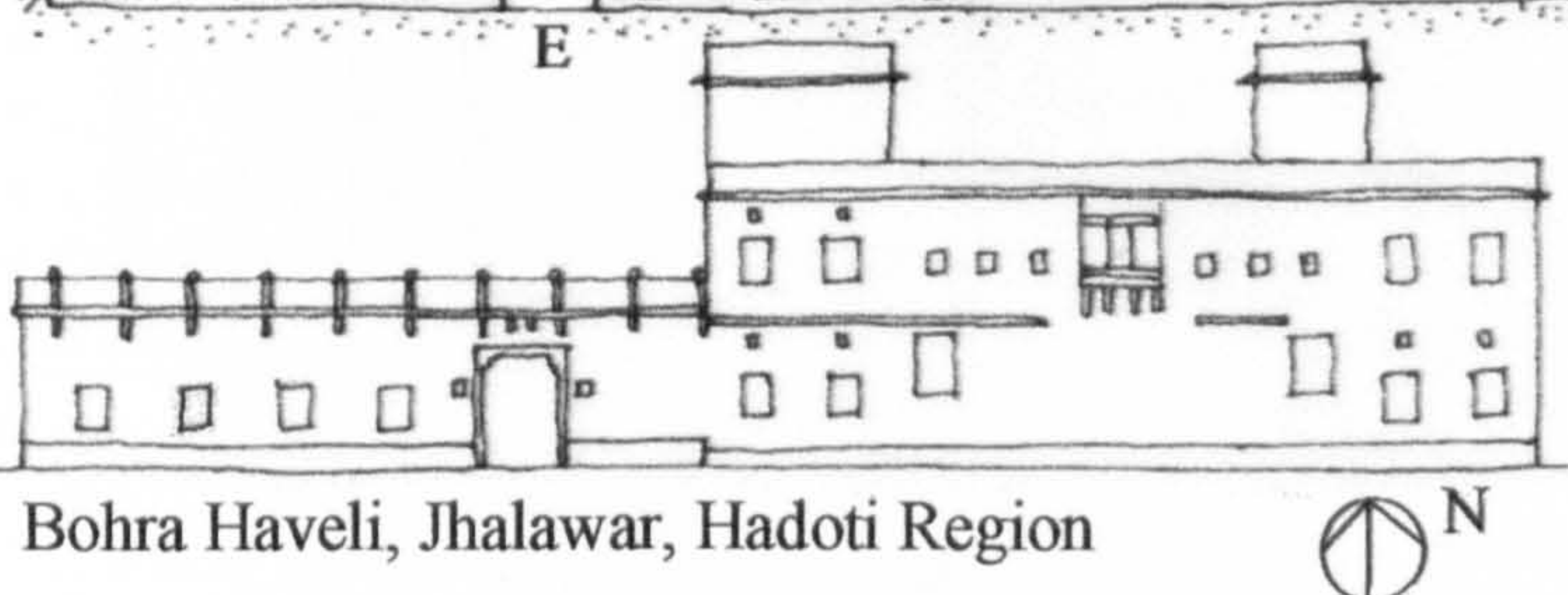
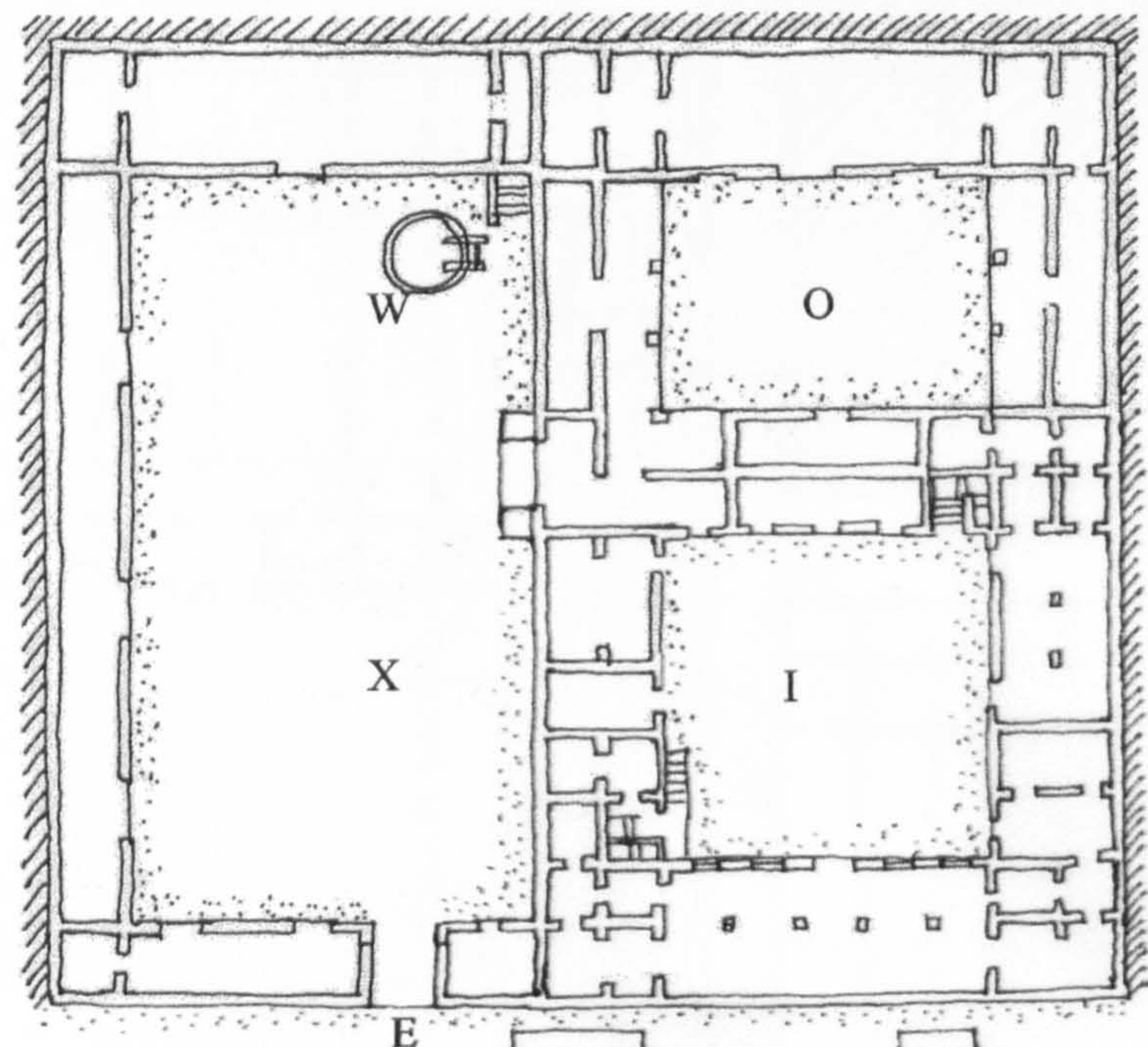
#### LEGEND

Entrance - E      Inner Court - O  
Outer Court - O      Annexe area - X  
Well - W

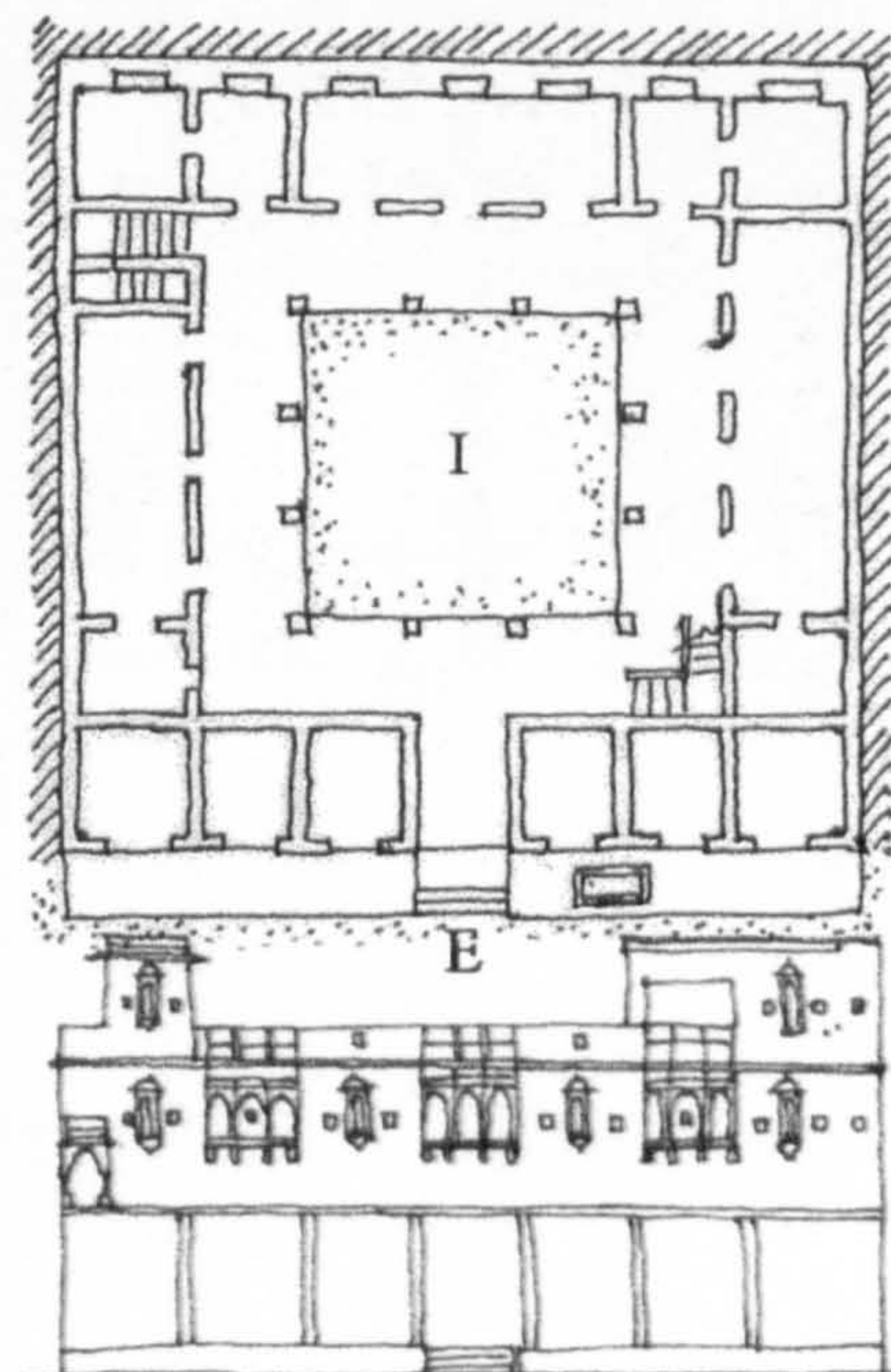
0      10'      50'

**Figure 3.8a - Marwari or Hindu Traders *Havelis* in Dundhar and Godwad region**

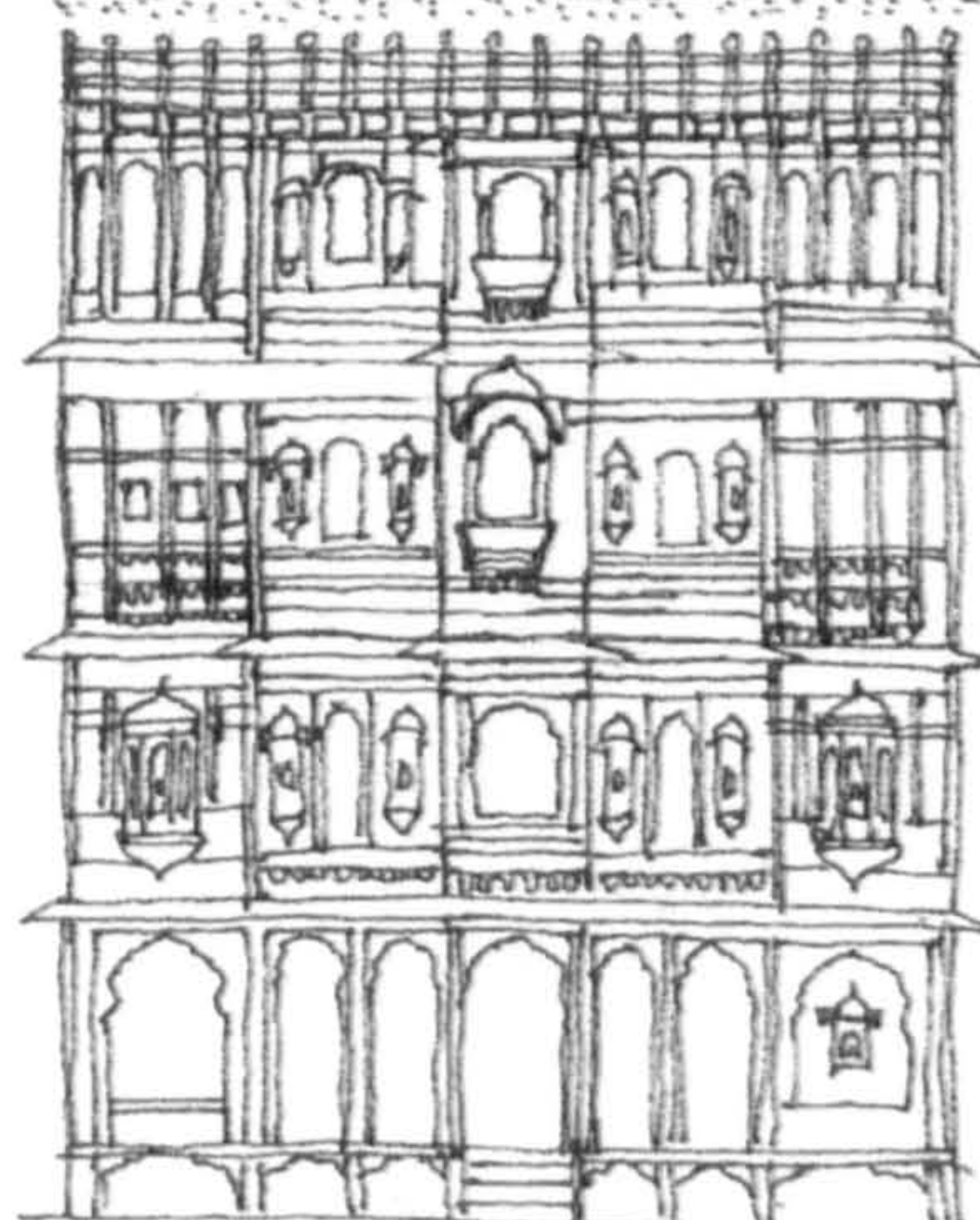
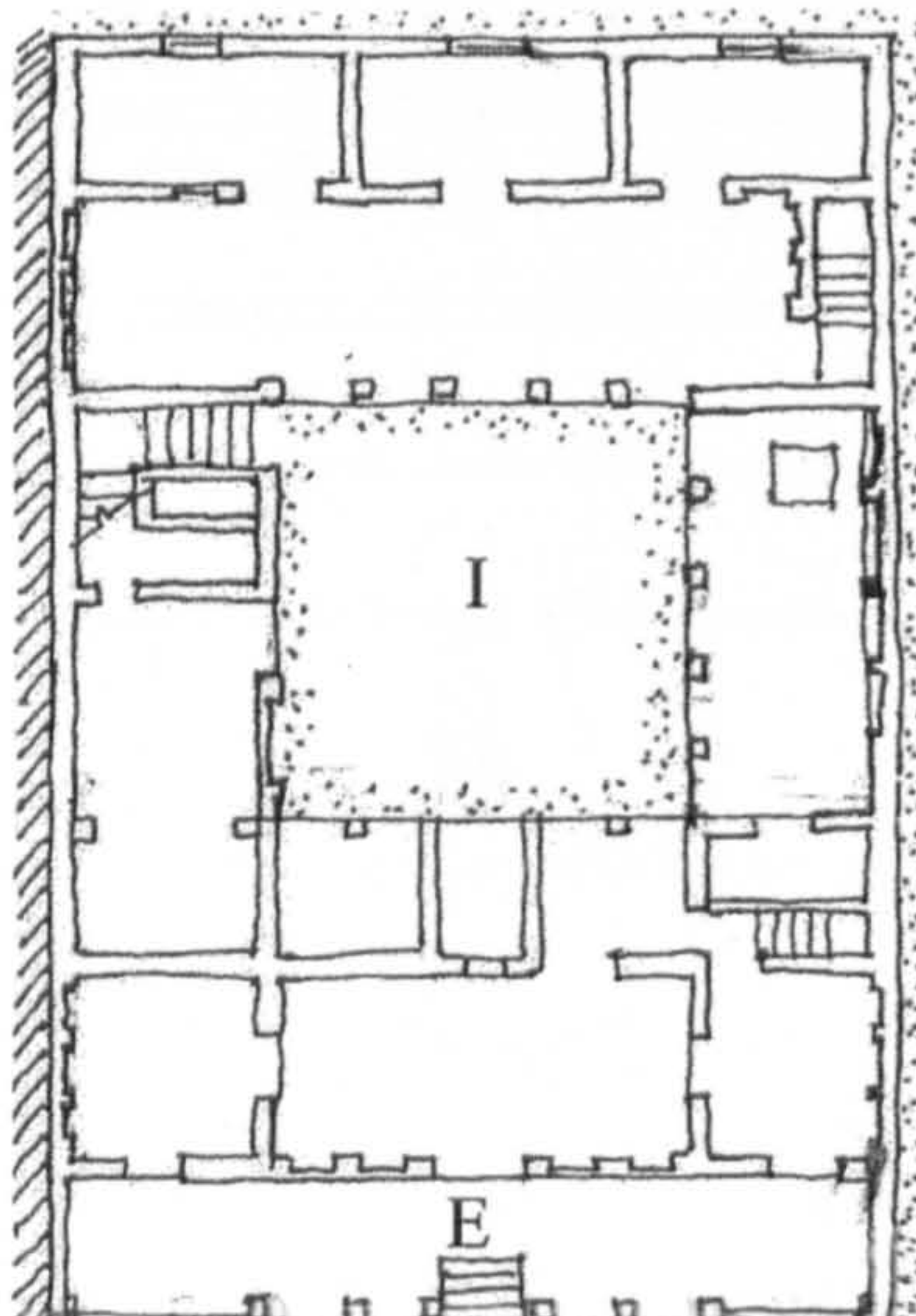




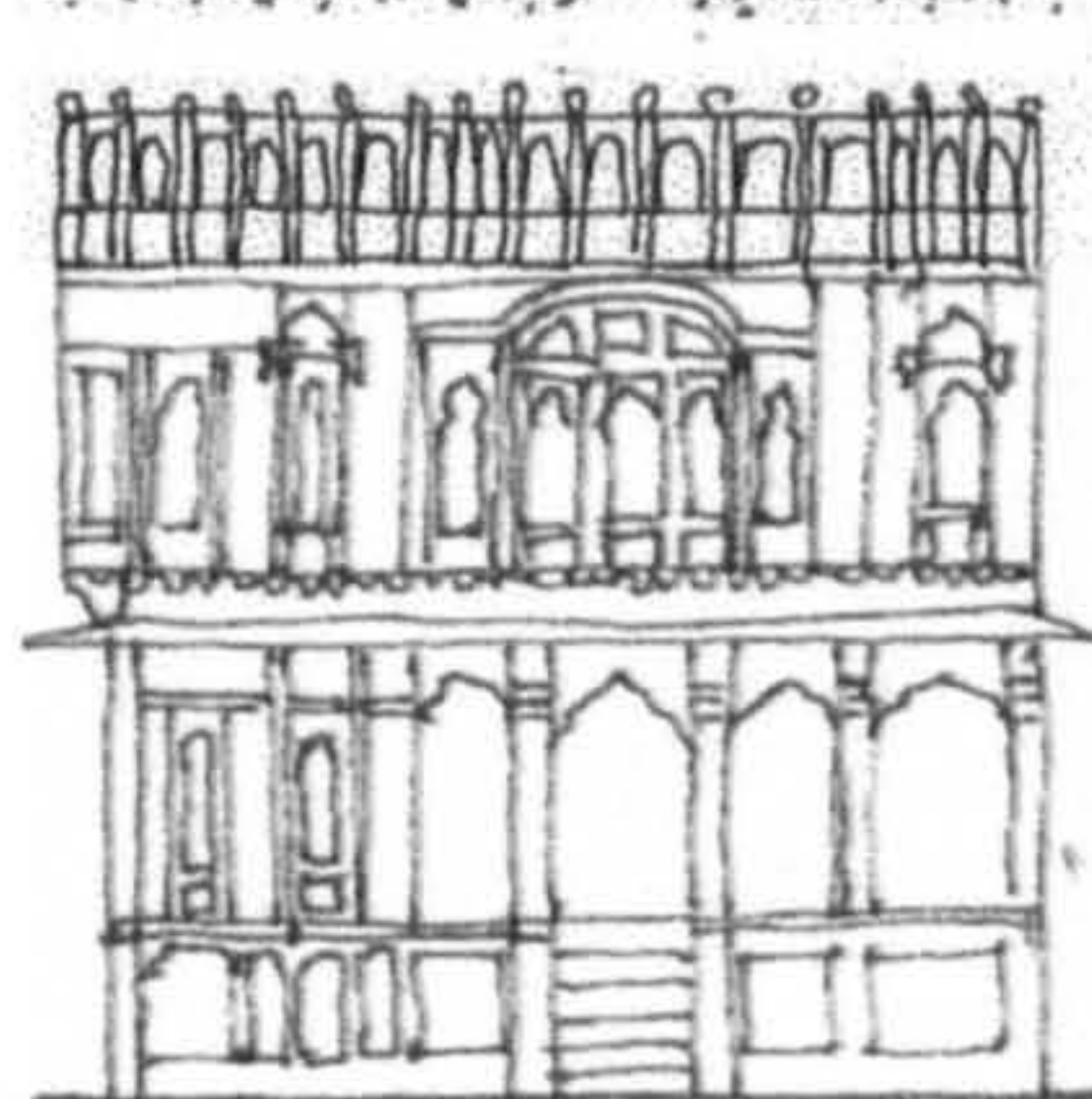
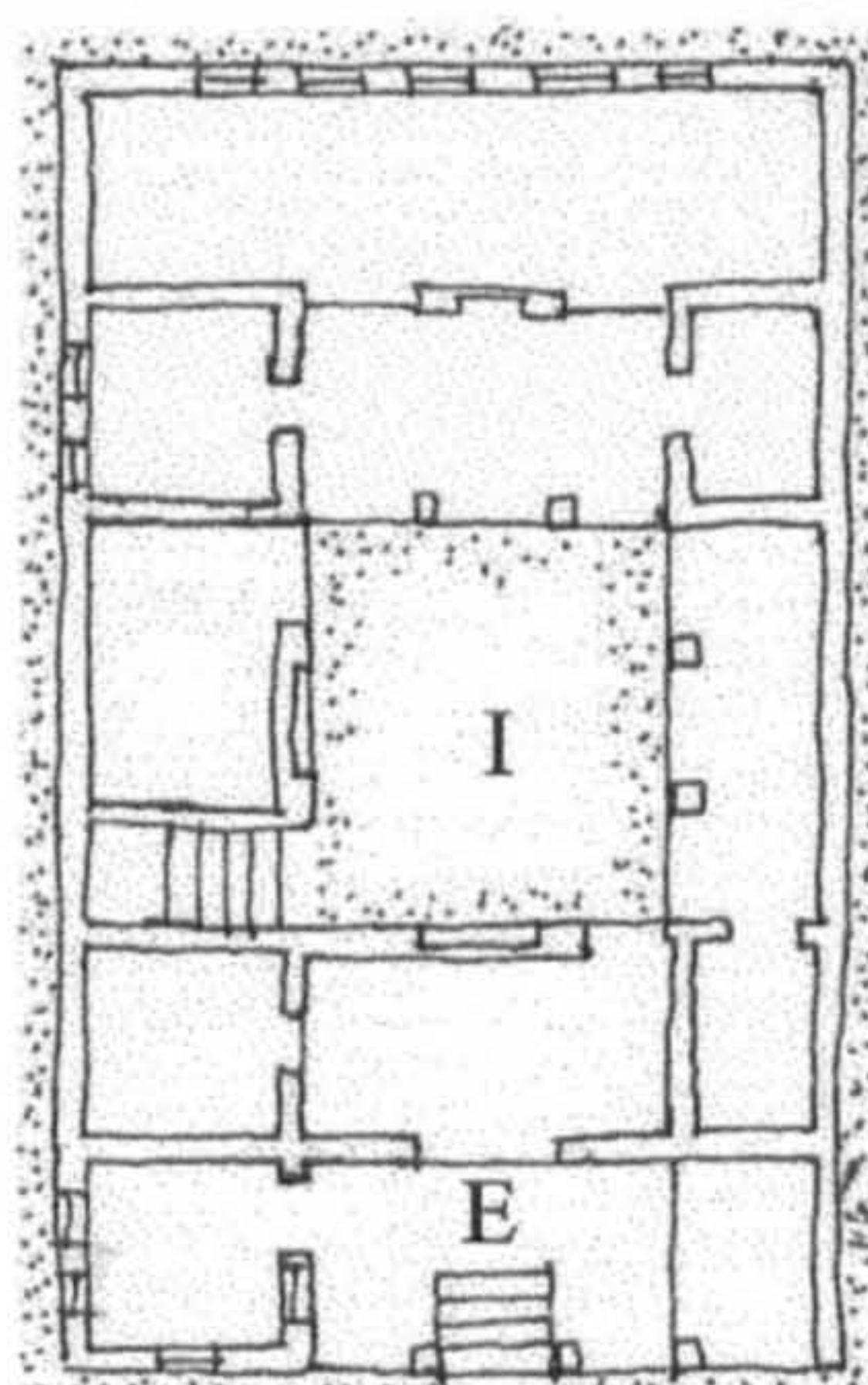
Bohra Haveli, Jhalawar, Hadoti Region



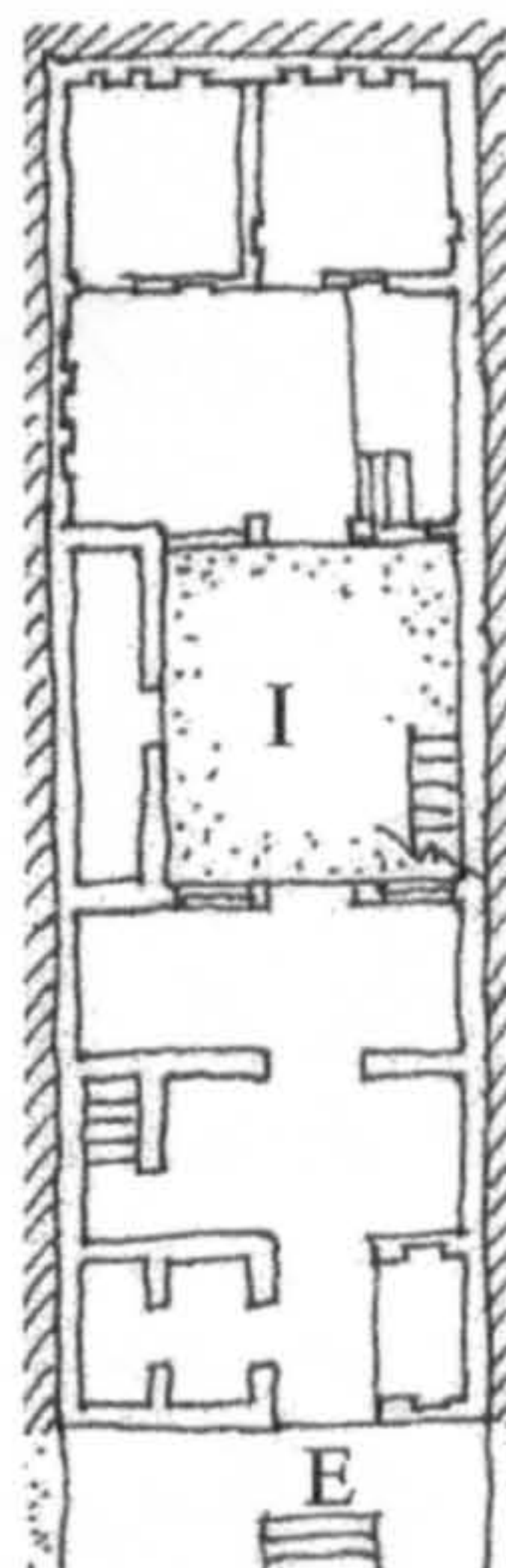
Bapna Haveli, Jhalrapatan, Hadoti Region



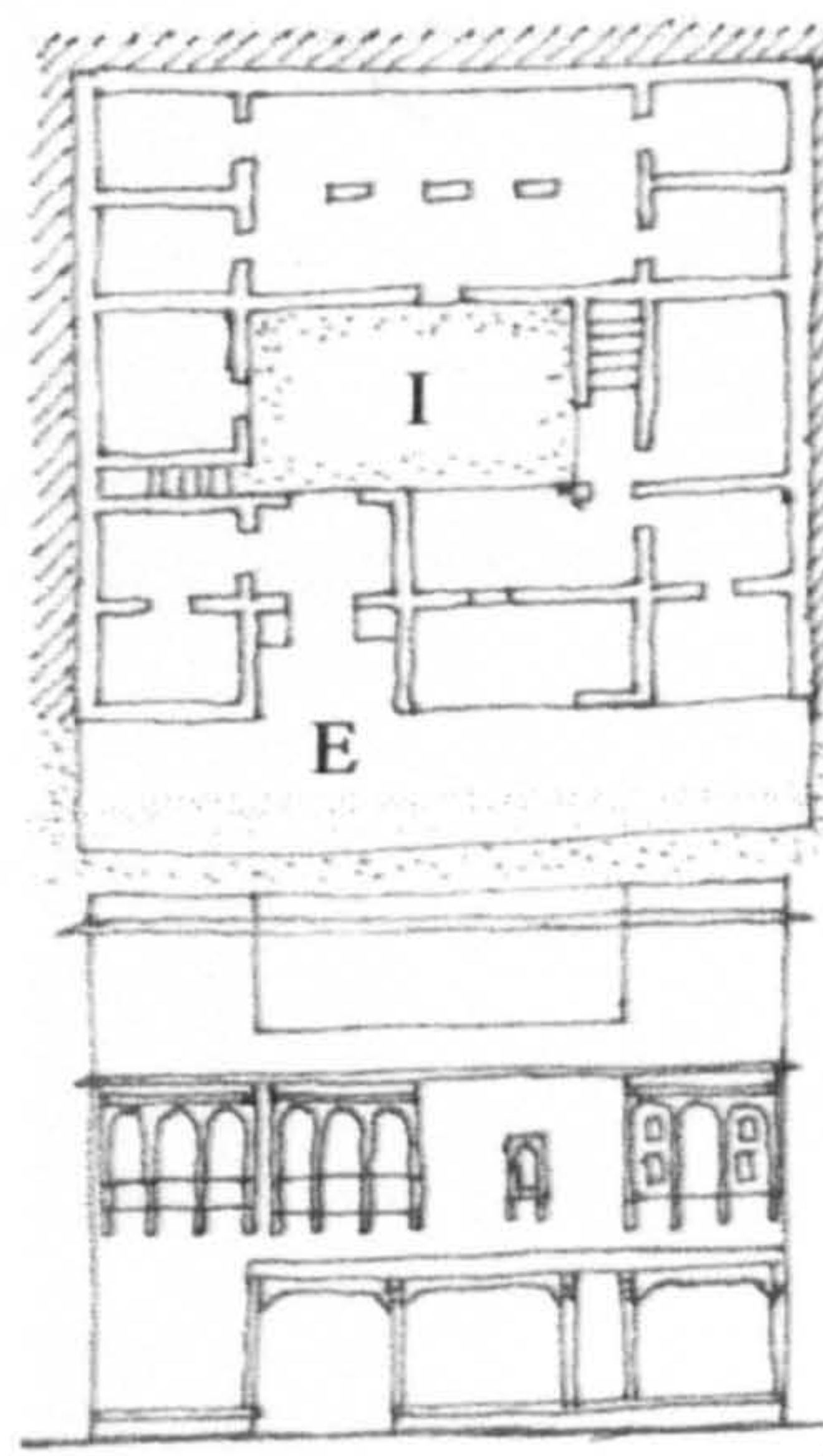
Patwa Haveli, Jaisalmer, Marwar region



Roshanlal Haveli, Pokhran, Marwar Region



Haveli, Sojat, Marwar Region



Saraf Haveli, Jhalrapatan, Hadoti Region

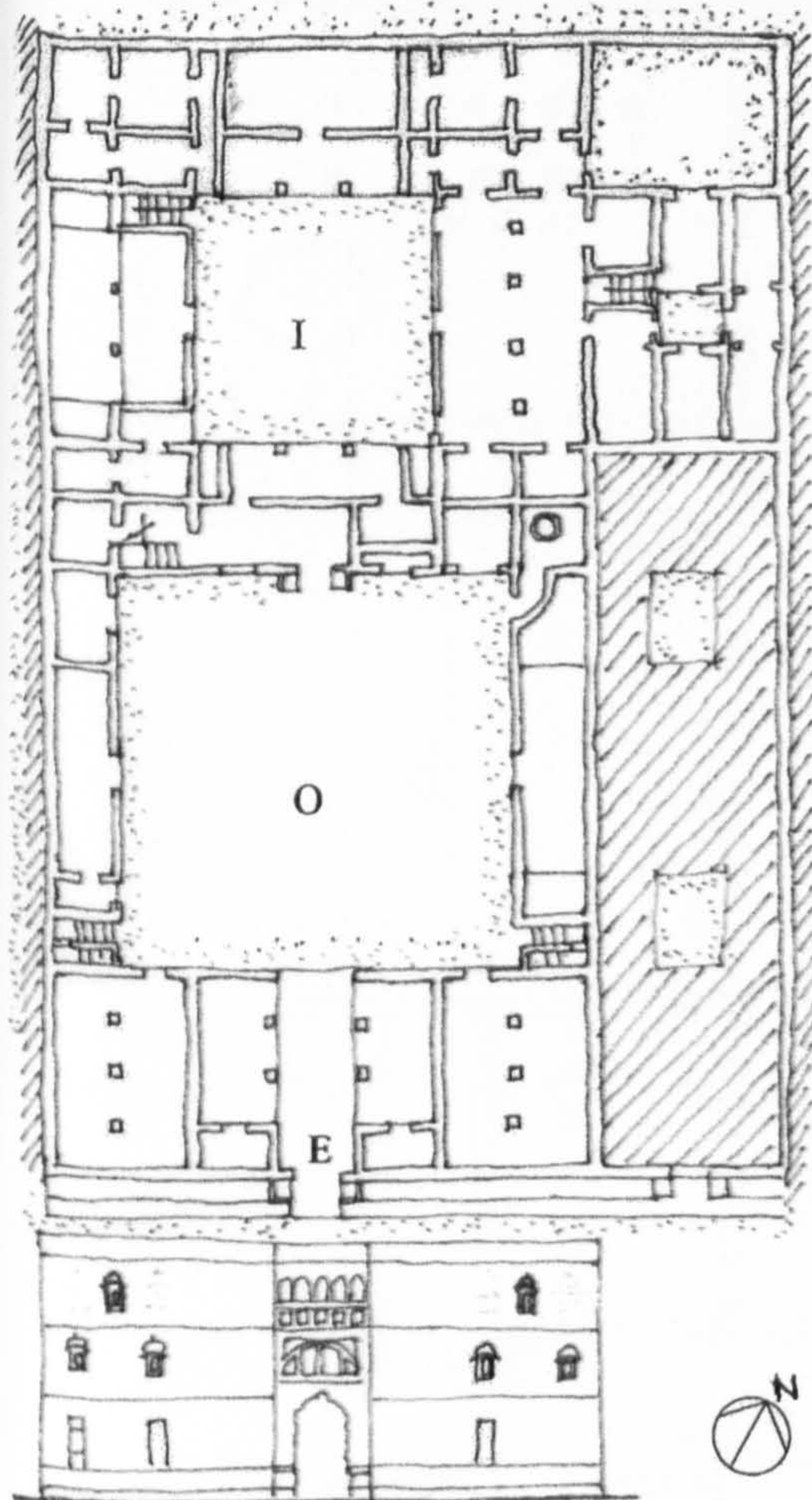
#### LEGEND

Entrance - E  
Inner Court - I  
Outer Court - O  
Annexe area - X  
Well - W

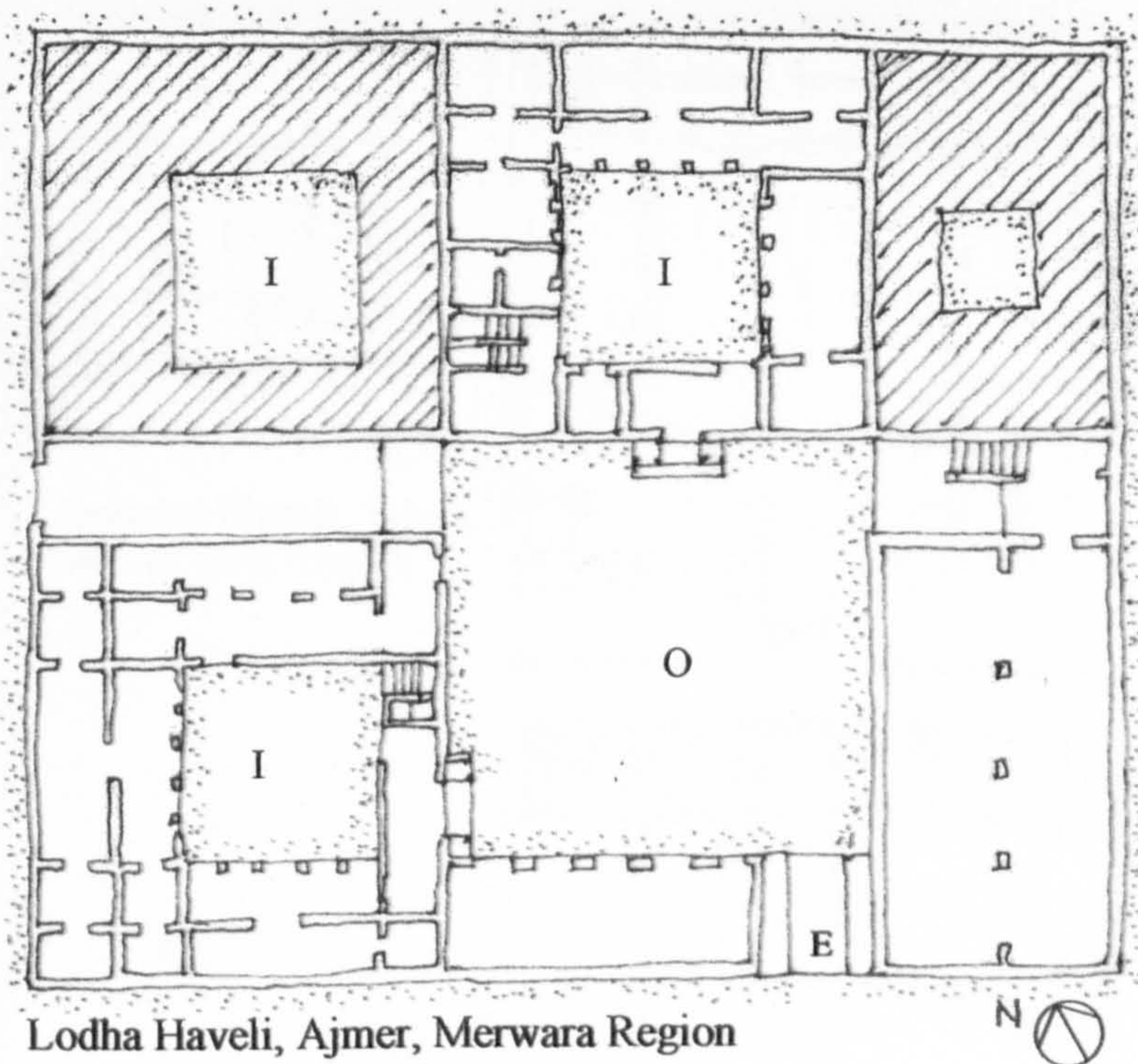
0 10' 50'

**Figure 3.8b - Marwari or Hindu Traders *Havelis* in Hadoti and Marwar Regions**

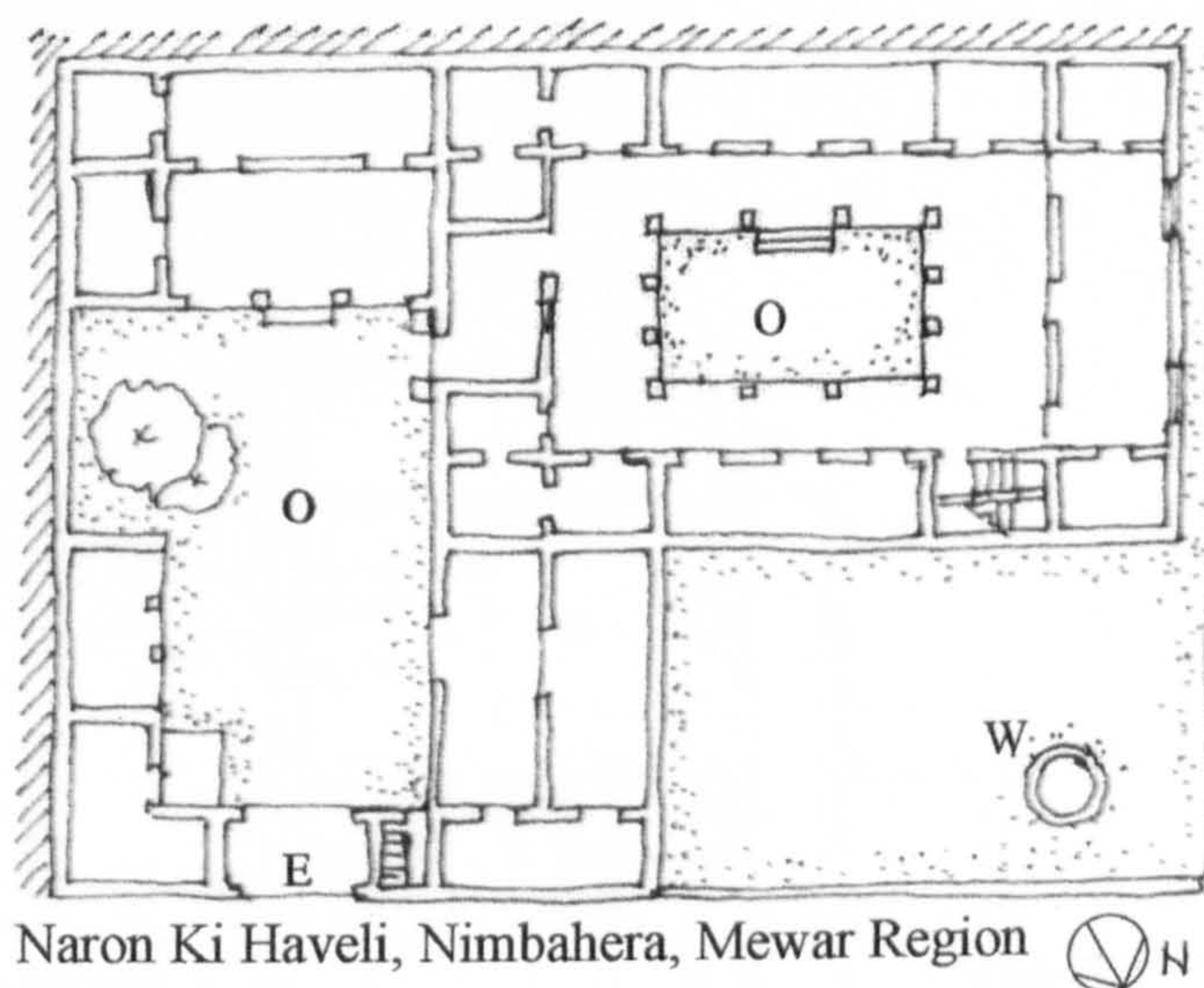




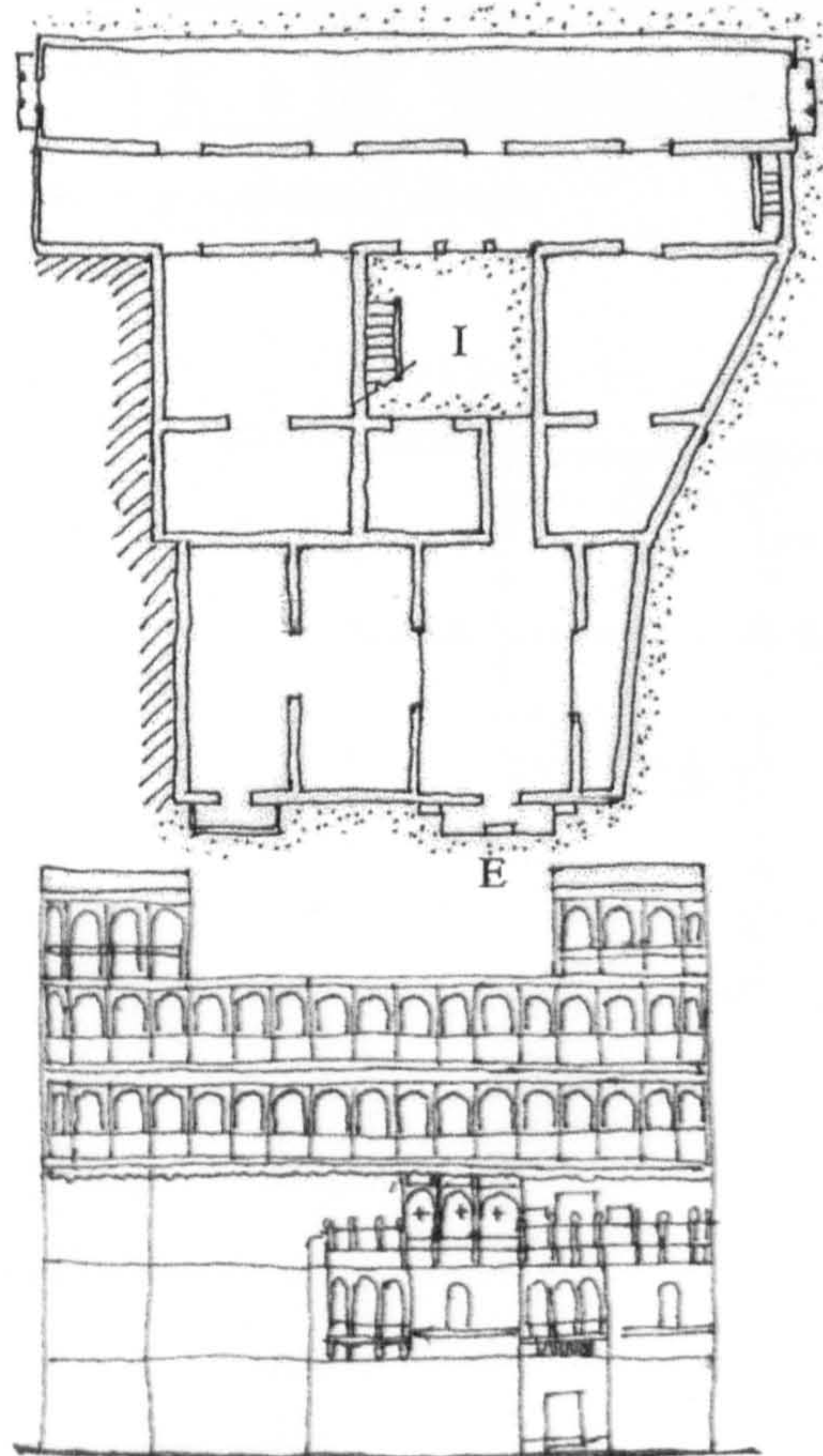
Mehtan Haveli, Kishangarh, Merwara Region



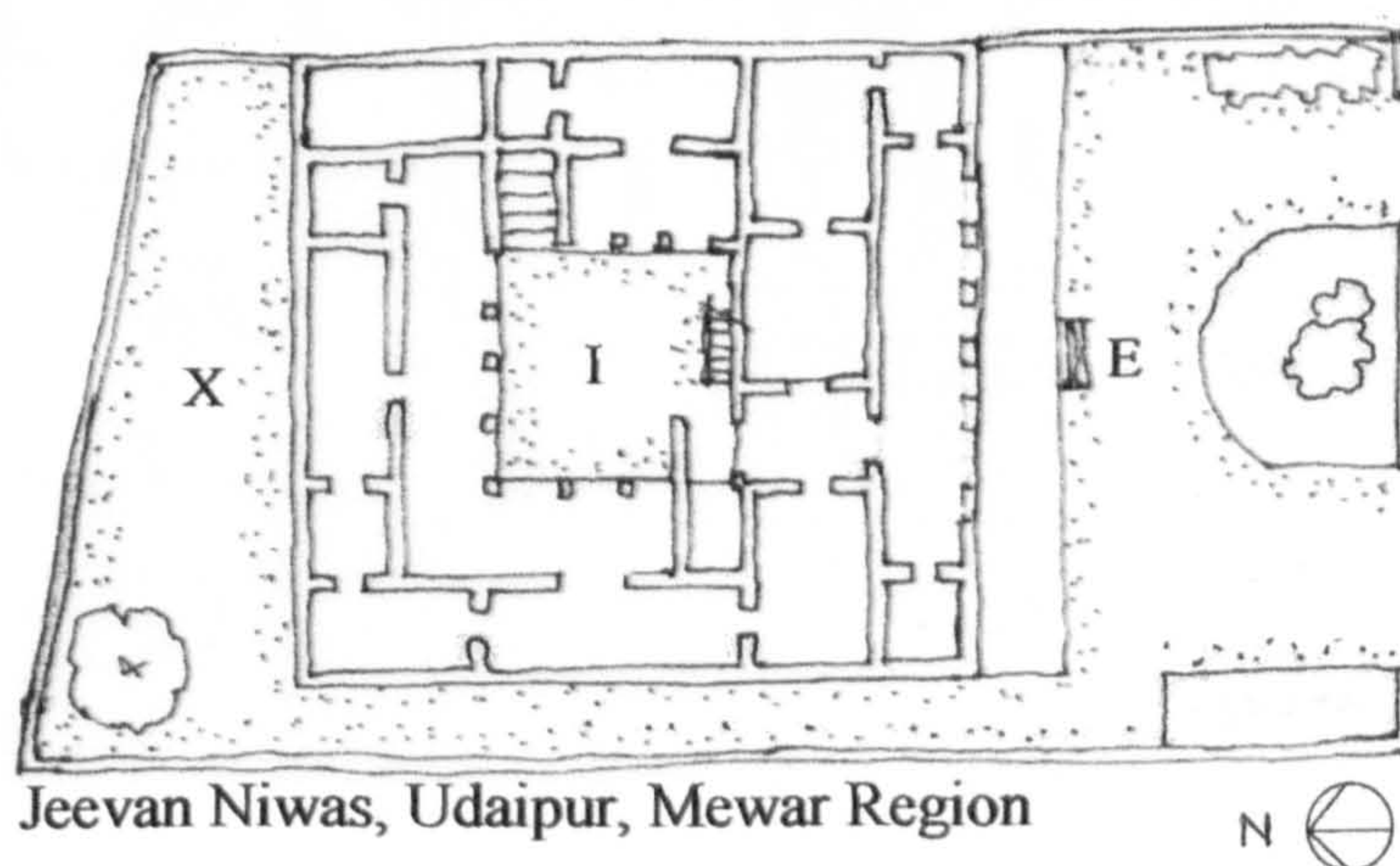
Lodha Haveli, Ajmer, Merwara Region



Naron Ki Haveli, Nimbahera, Mewar Region



Sharda Haveli, Nimbahera, Mewar Region



Jeevan Niwas, Udaipur, Mewar Region

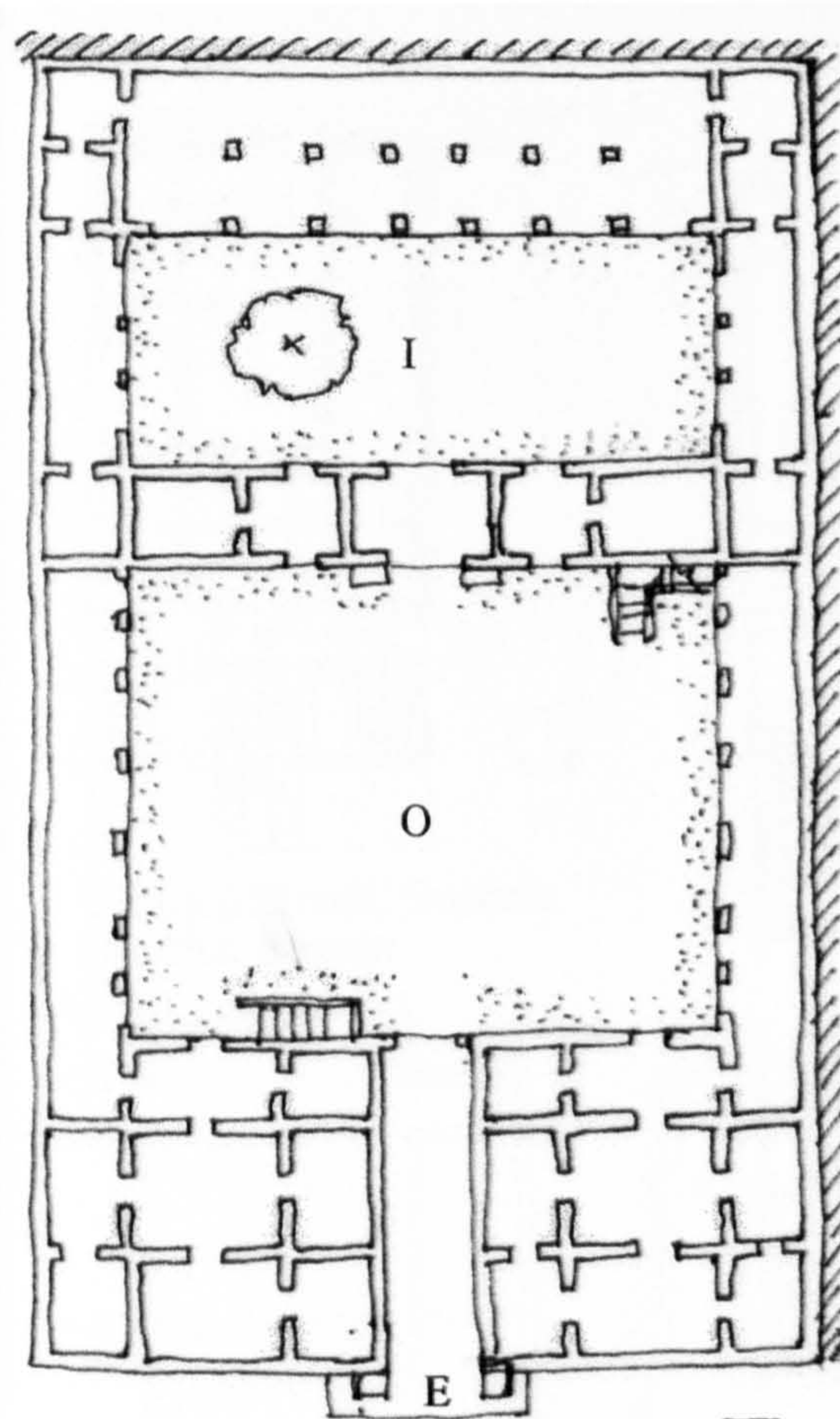
#### LEGEND

- Entrance - E
- Inner Court - I
- Outer Court - O
- Annexe area - X
- Well - W

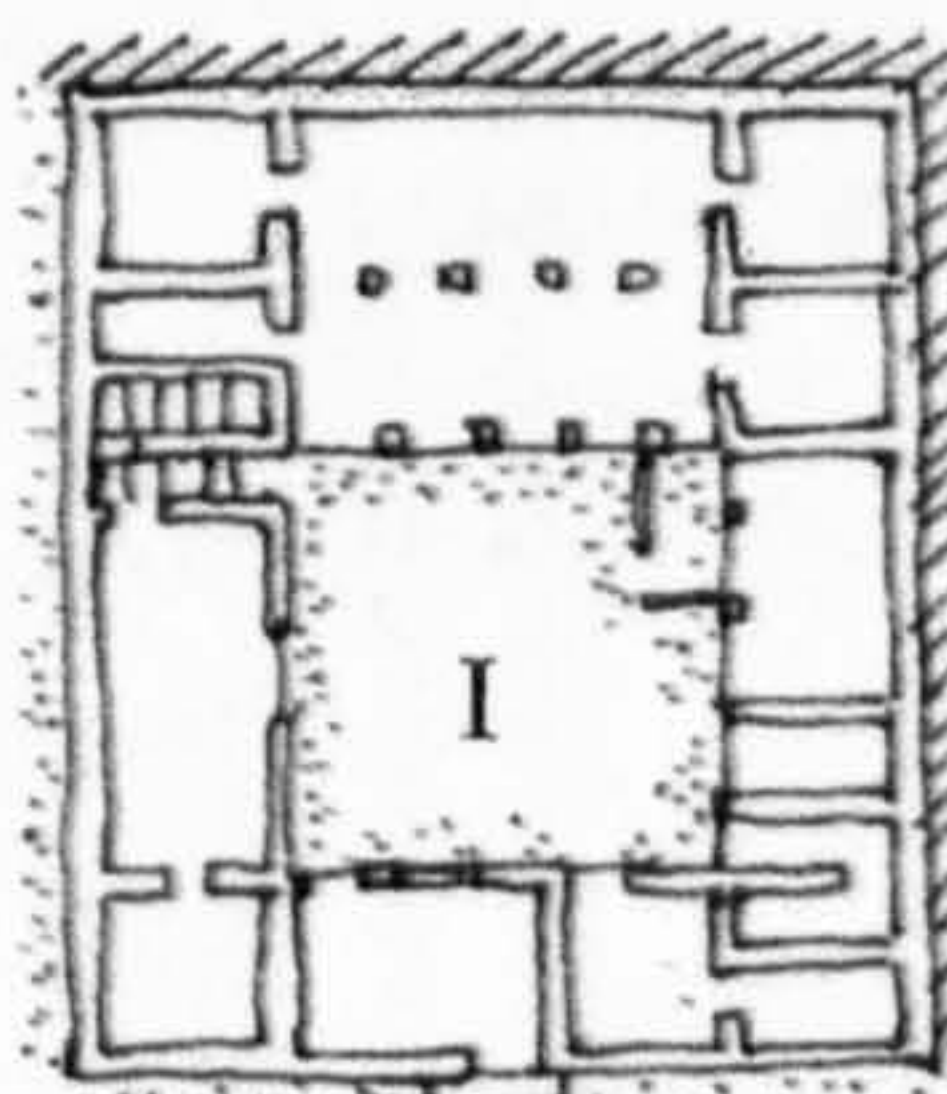
0 10' 50'

Figure 3.8c - Marwari Havelis in Merwara and Mewar Regions

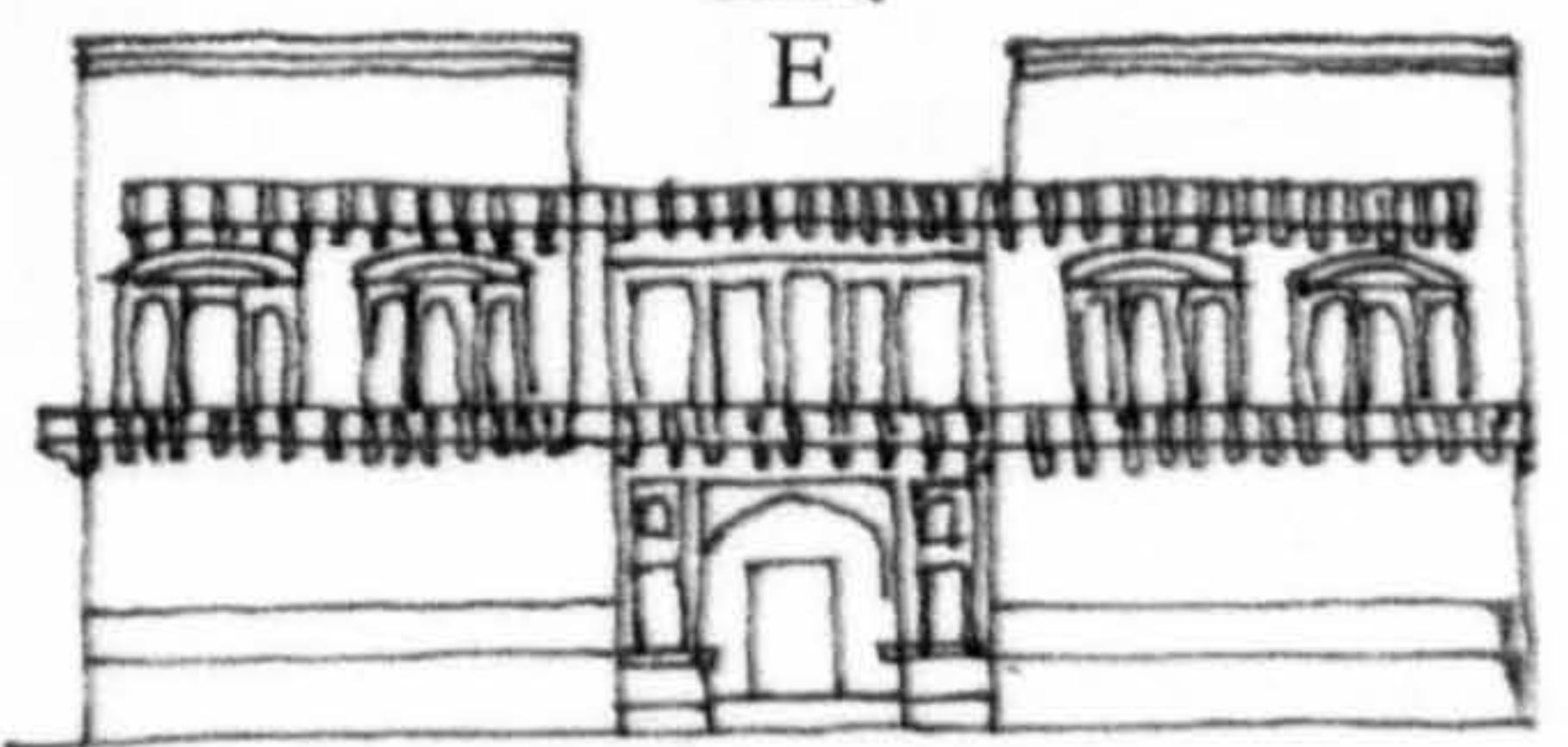
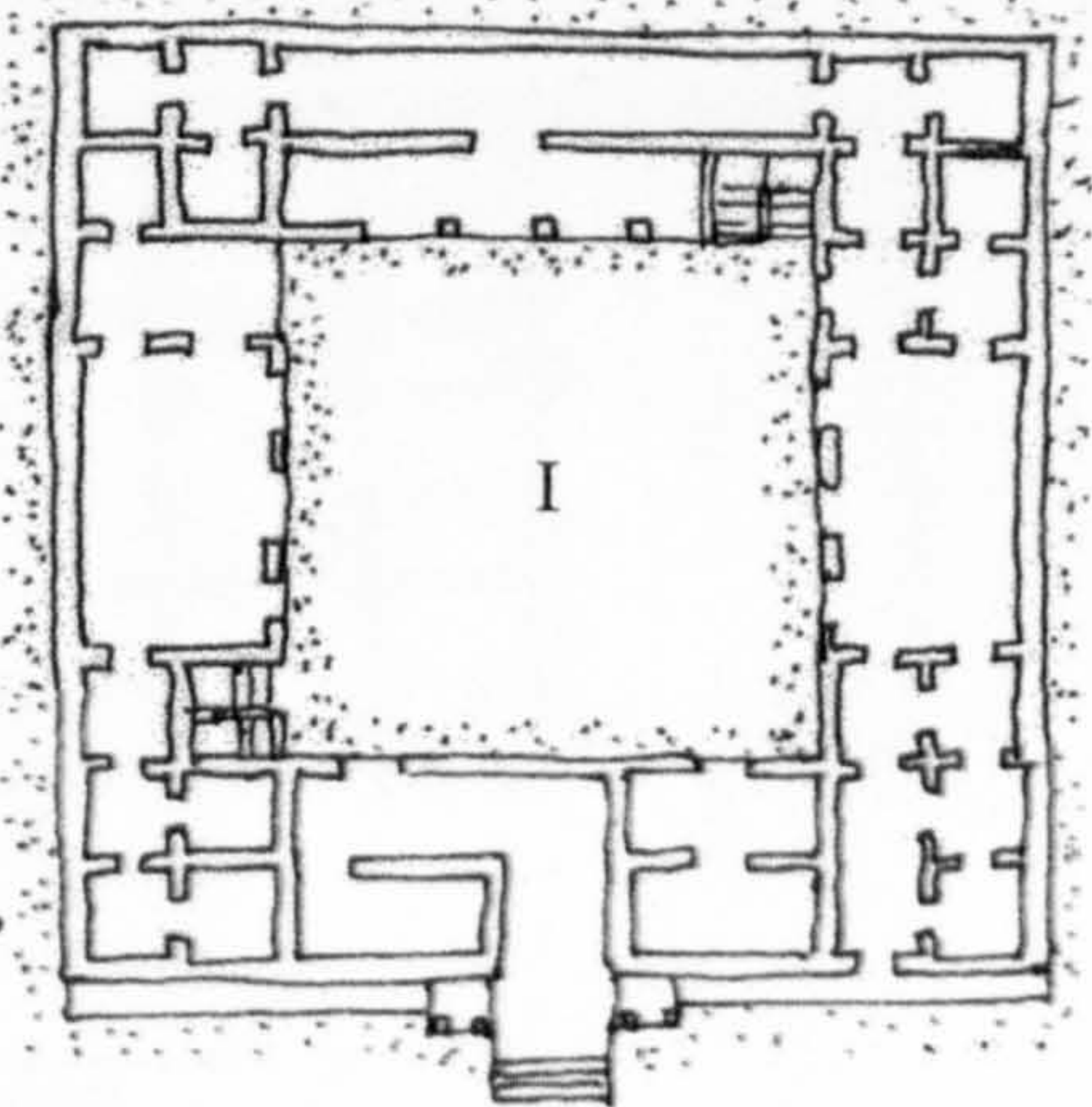




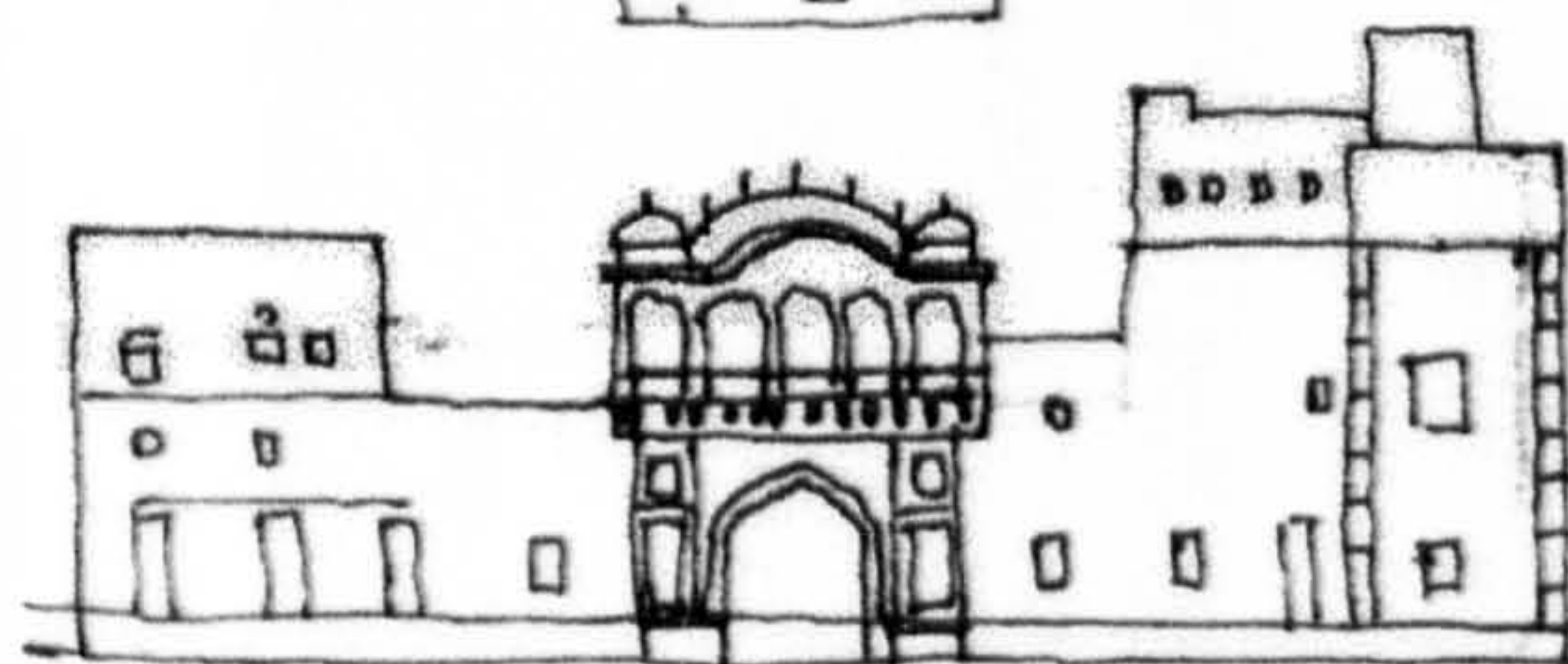
Agarwal Haveli, Tijara,  
Mewat -Brij Region



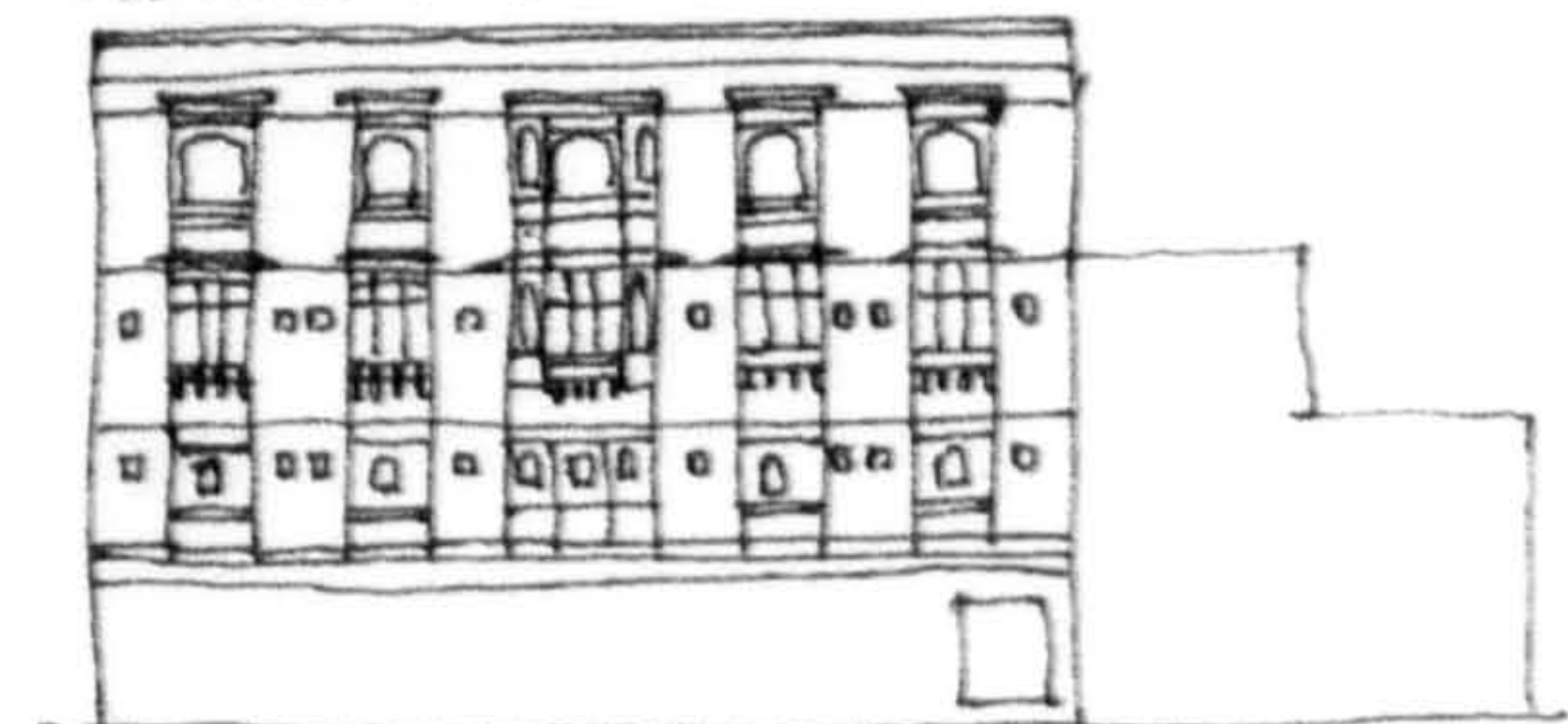
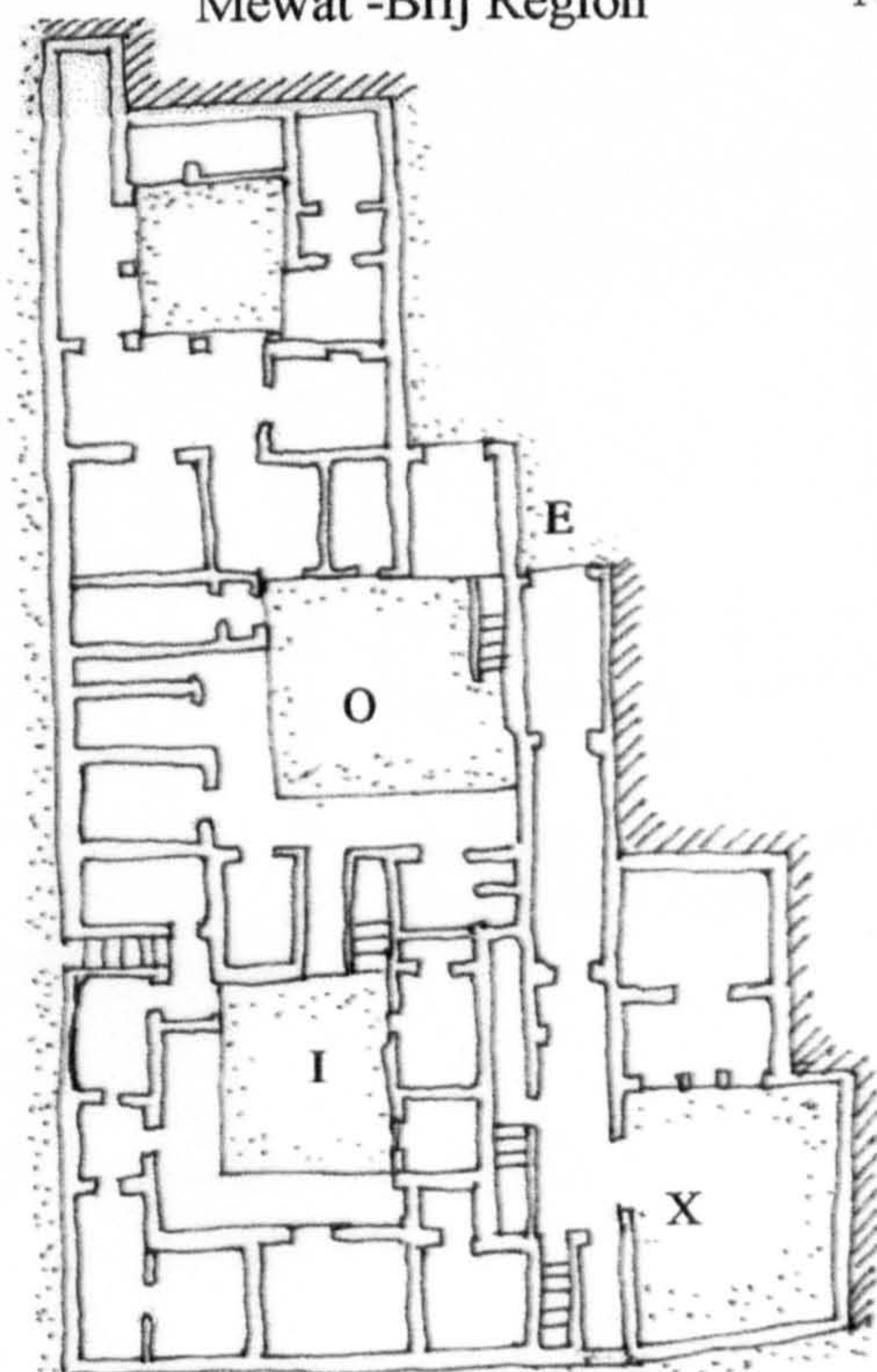
E



Diwanon Ki Haveli, Alwar,  
Mewat -Brij Region

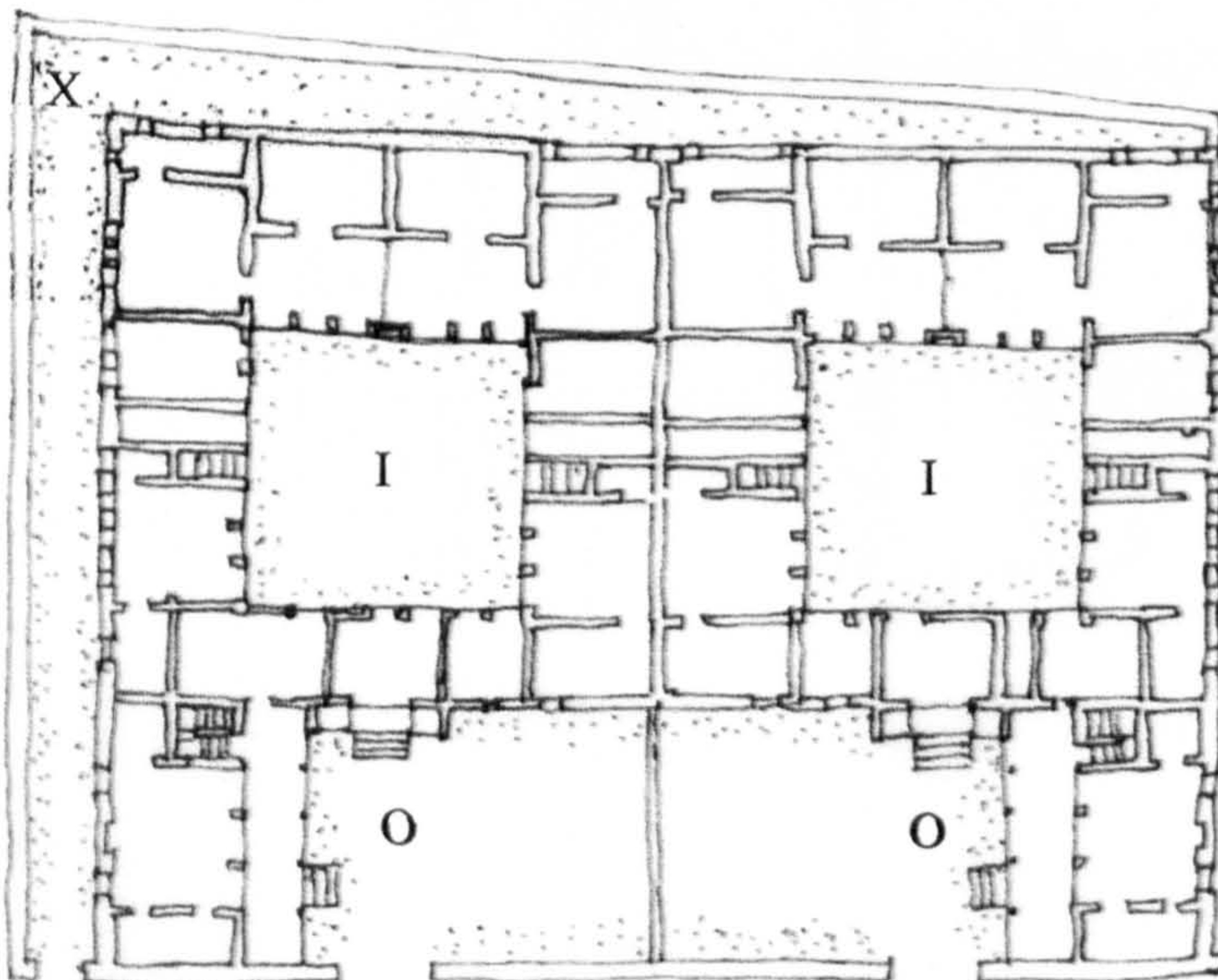


Lakshmi Sansthan, Alwar,  
Mewat - Brij Region



Kothari Haveli, Banswara,  
Vagad Region

N



Double Goenka Haveli, Mandawa,  
Shekhawati Region

E



#### LEGEND

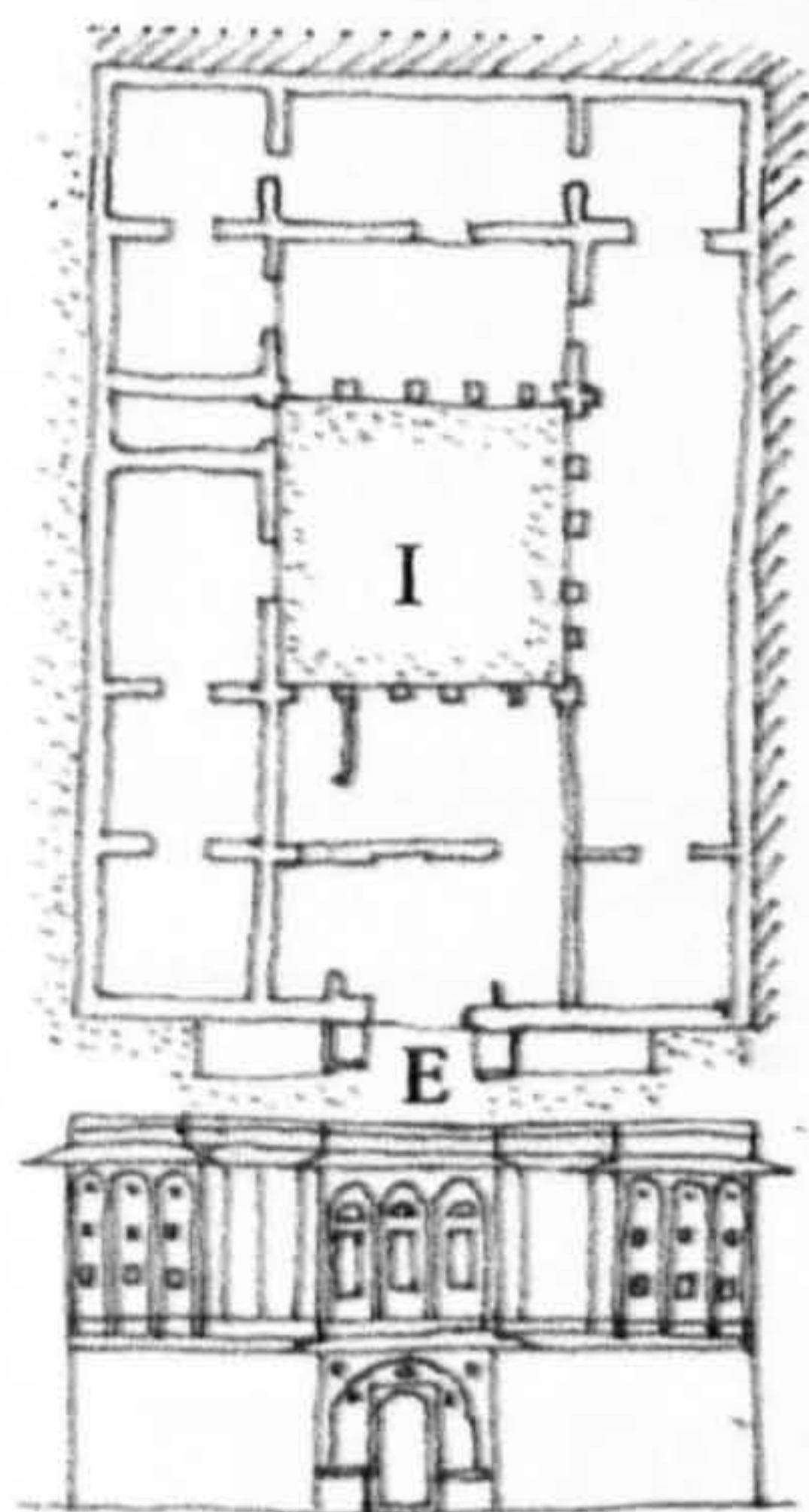
Entrance - E Inner Court - I Outer Court - O Annexe - X

0 10' 50'

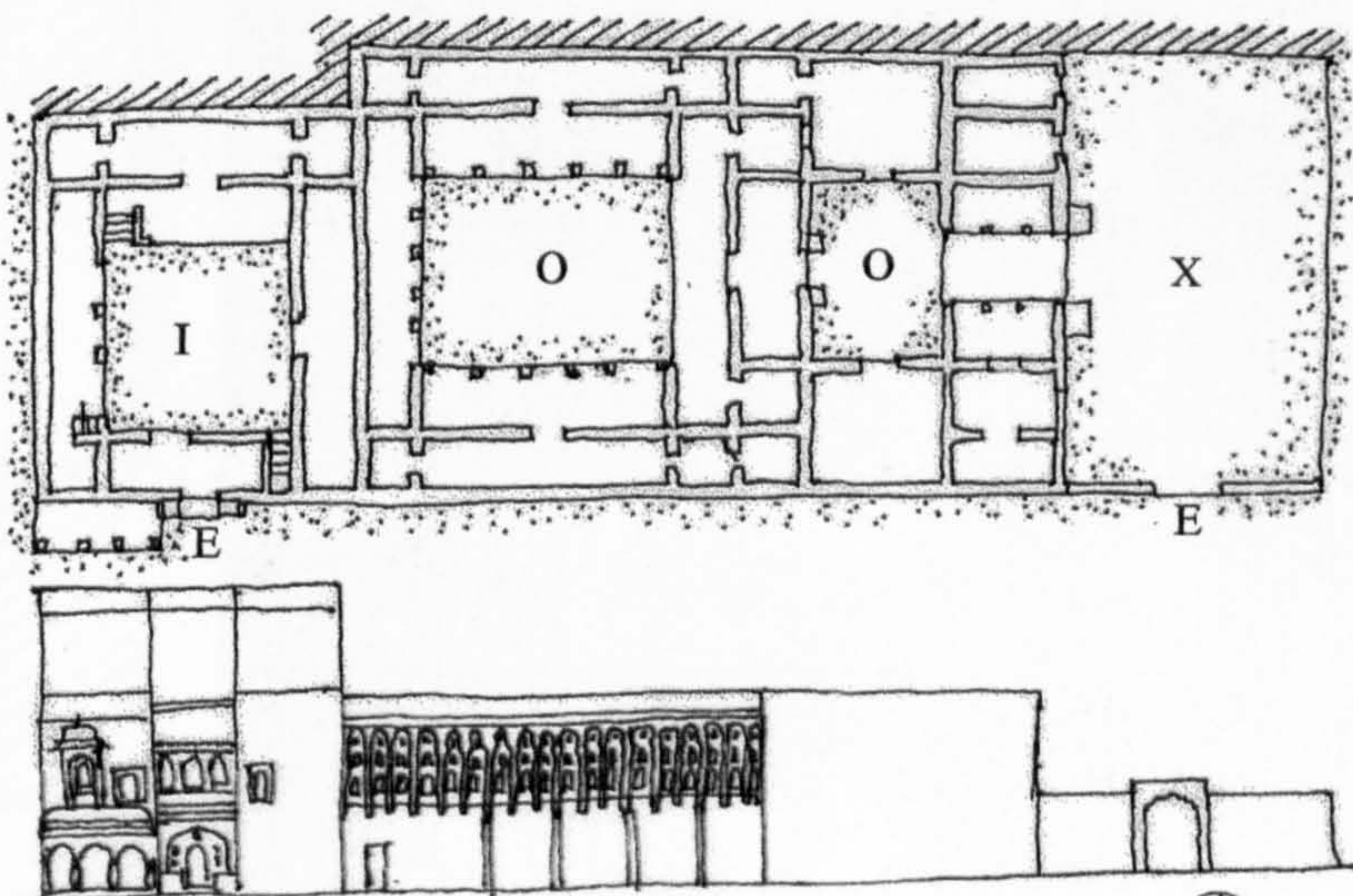


**Figure 3.8d - Marwari Havelis in Mewat-Brij, Shekhawati  
and Vagad Regions**

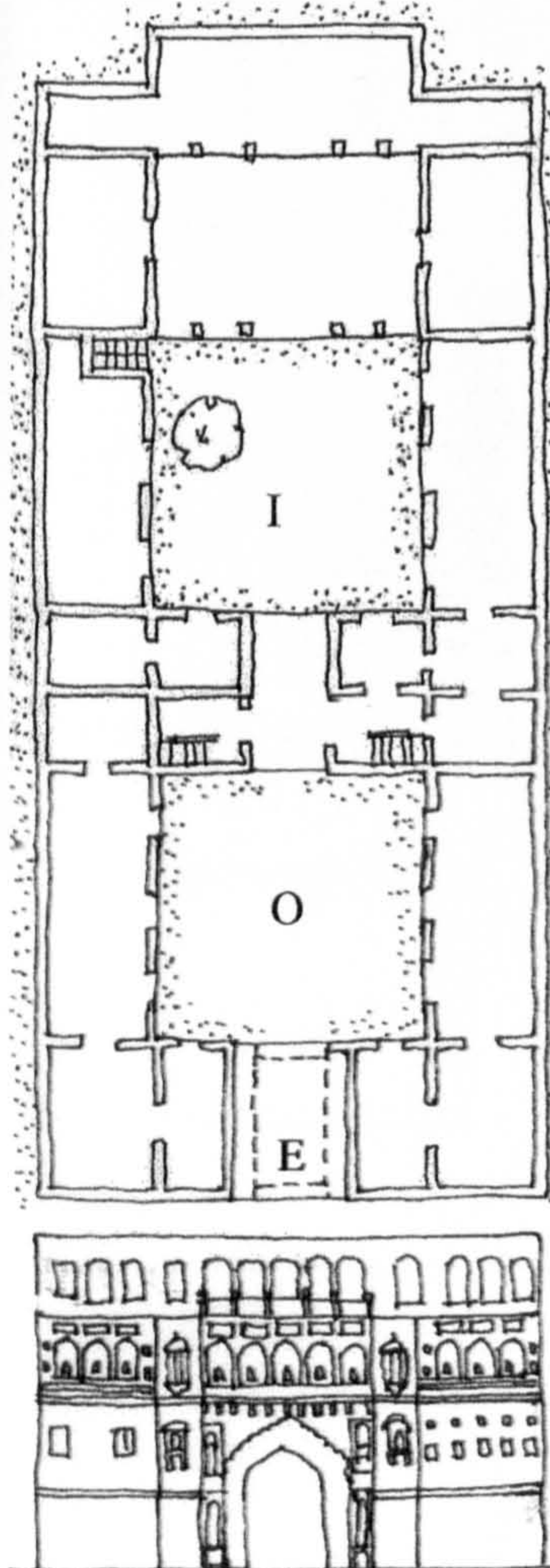




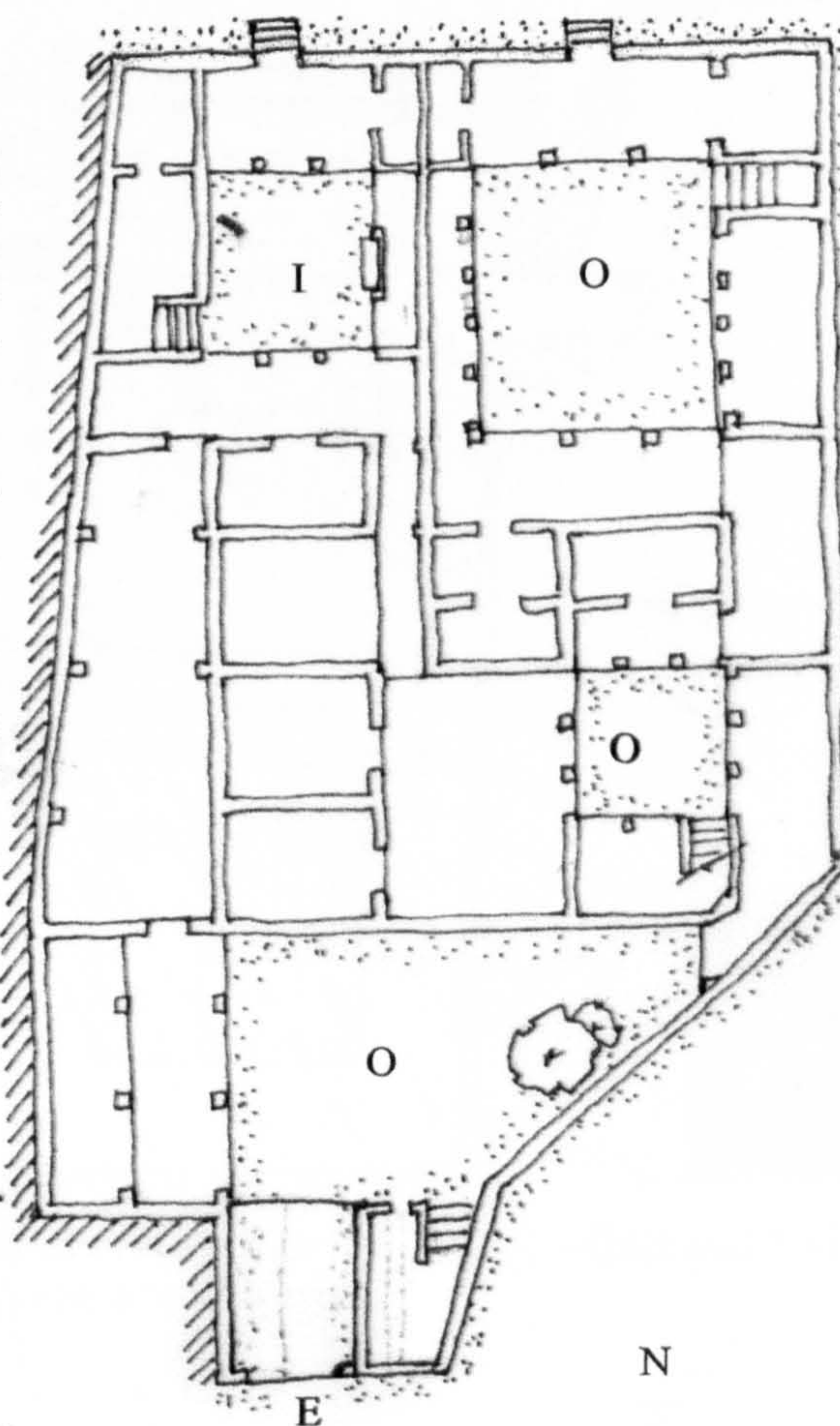
Dhabhai Haveli, Samode,  
Dundhar Region



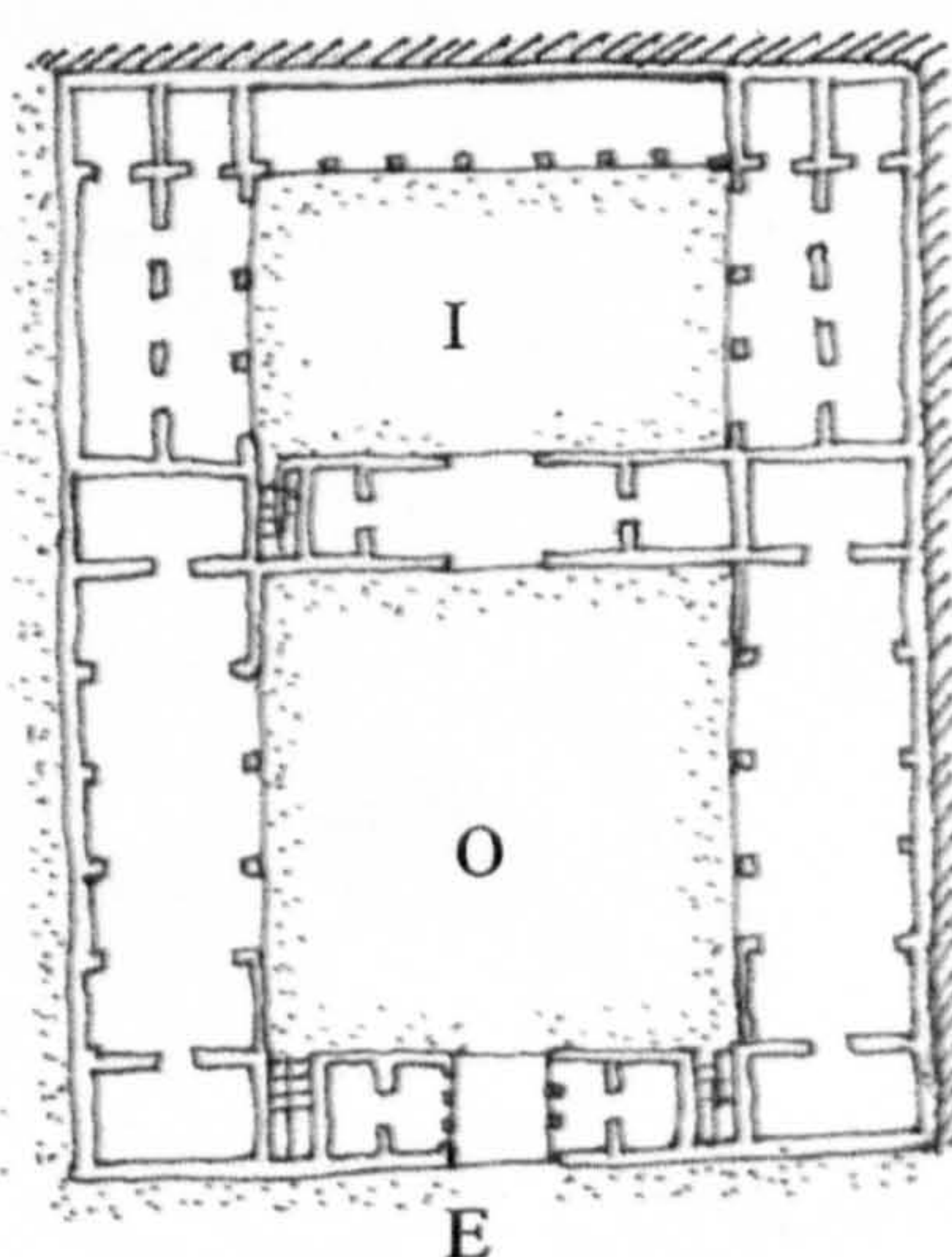
Babaji's Haveli, Sanganer, Dundhar Region



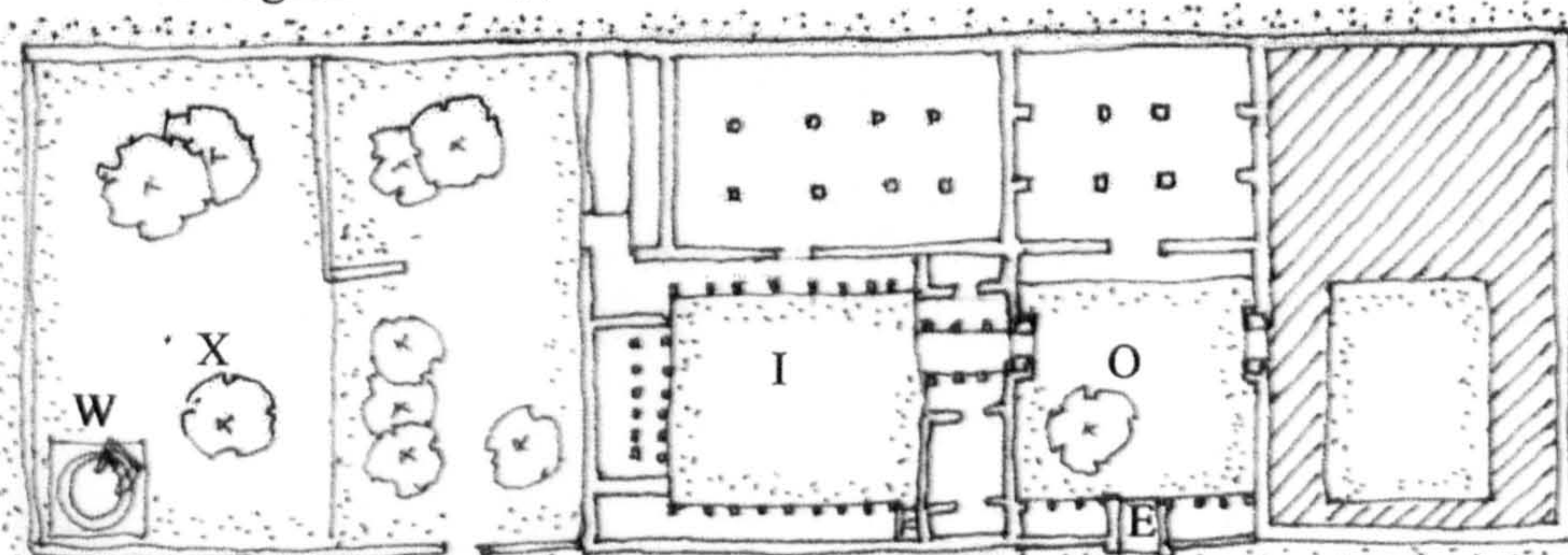
Maratha Haveli, Ajmer,  
Merwara Region



Mathur Haveli, Jodhpur, Marwar Region



Dhabhai Haveli, Alwar,  
Mewat-Brij Region



Dadupanth Mahant Ki Haveli, Rajgarh, Mewat-Brij Region

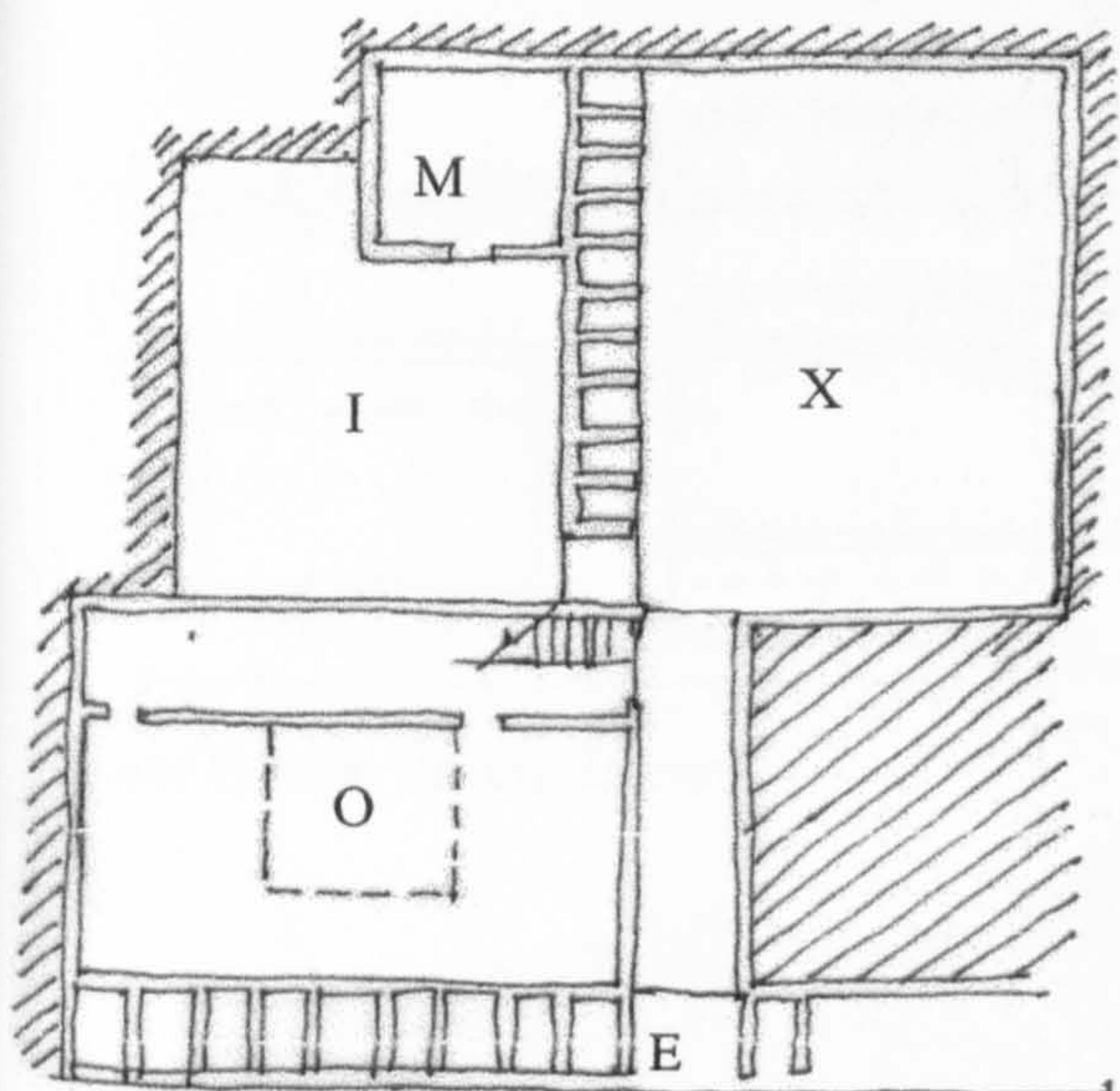
#### LEGEND

Entrance - E  
Inner Court - I  
Outer Court - O  
Annexe area - X  
Well - W

0 10' 50'

Figure 3.9 - *Havelis* of Other Hindu Castes

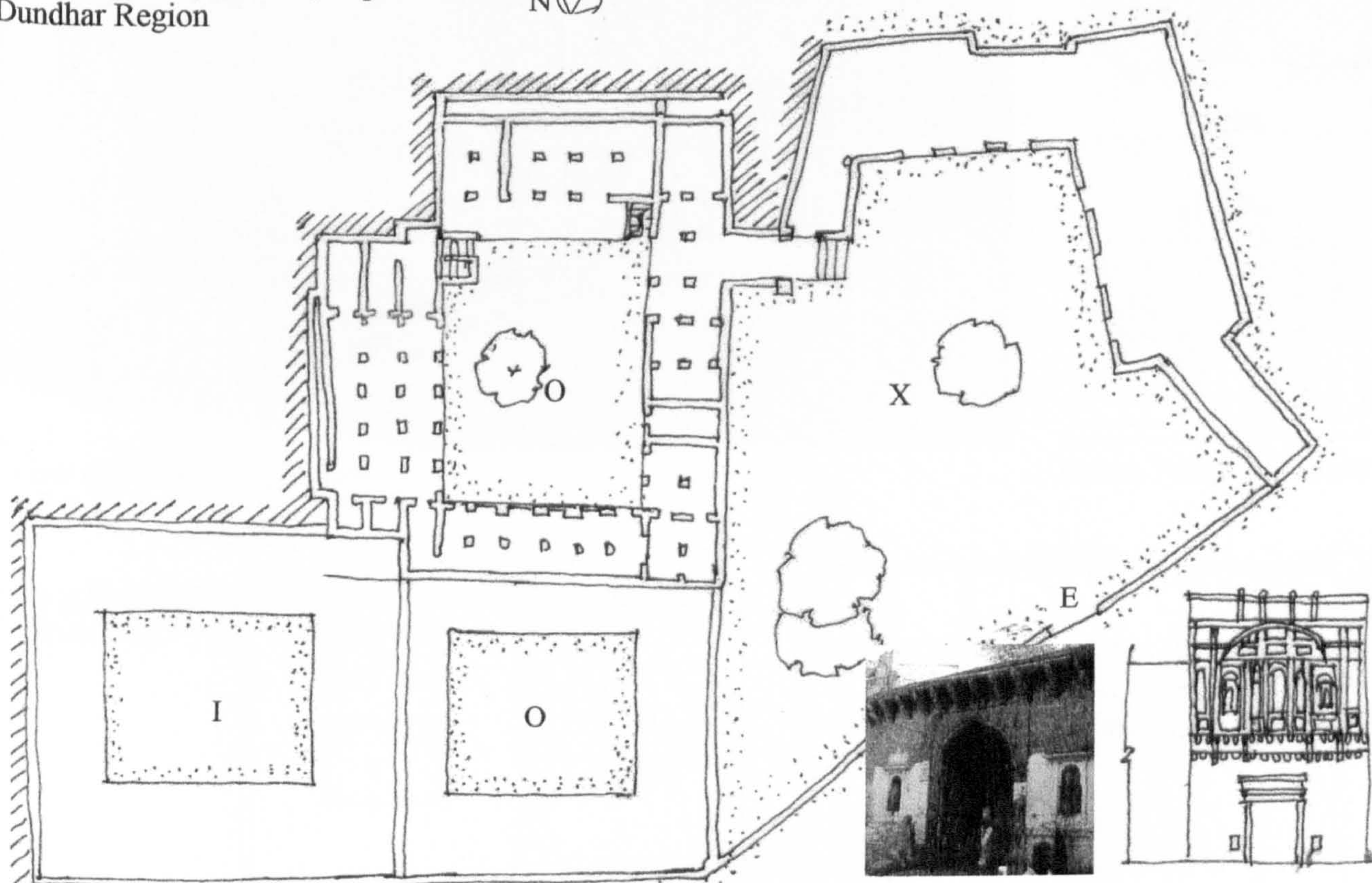




Nawab Saheb Ki Haveli, Jaipur.  
Dundhar Region



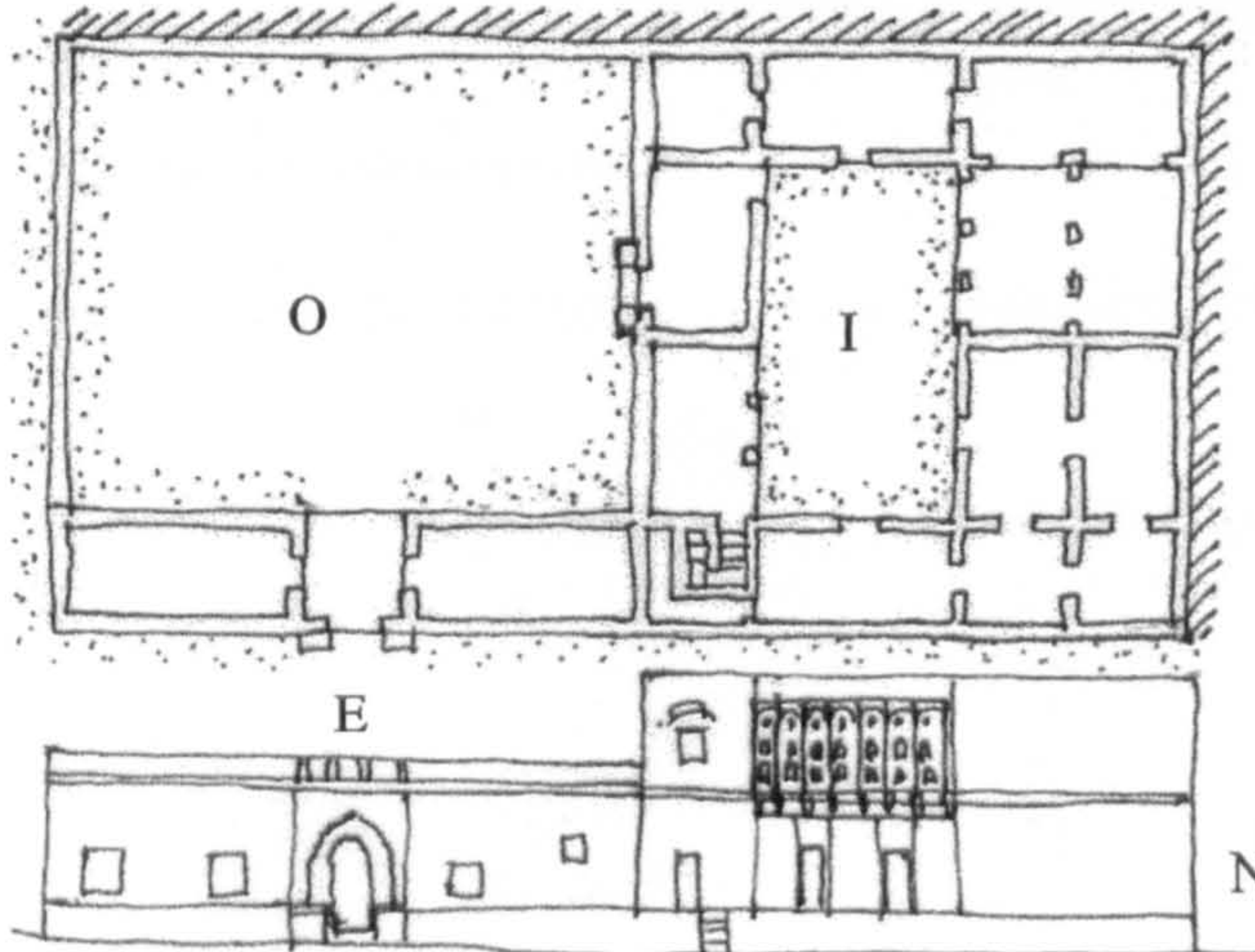
Front Façade of Nawab Saheb Ki Haveli



Bade Miya Ki Haveli, Jodhpur, Marwar Region



Gate and End Façade of Bade Miya Ki Haveli



Mir Saab Ki Haveli, Kishangarh, Merwara Region

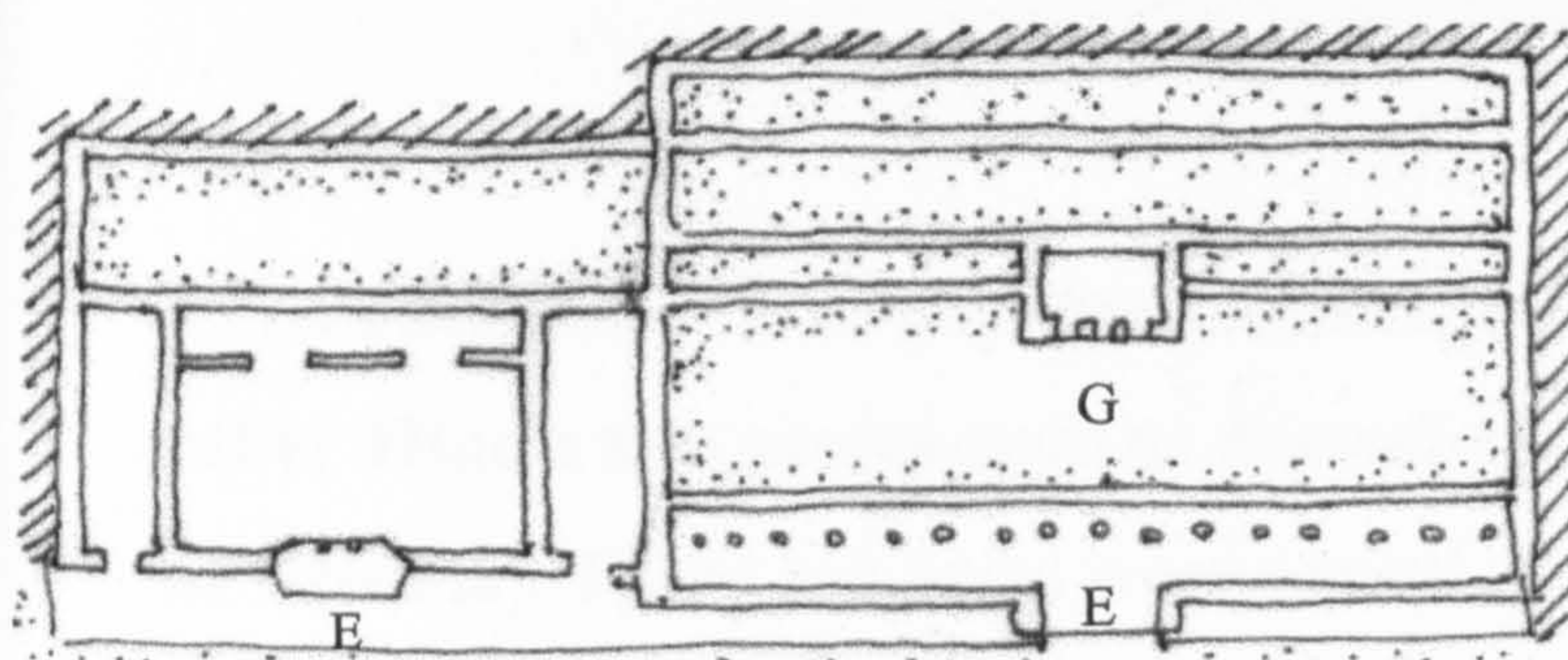
#### LEGEND

- Entrance - E
- Inner Court - I
- Outer Court - O
- Masjid - M
- Annexe area - X

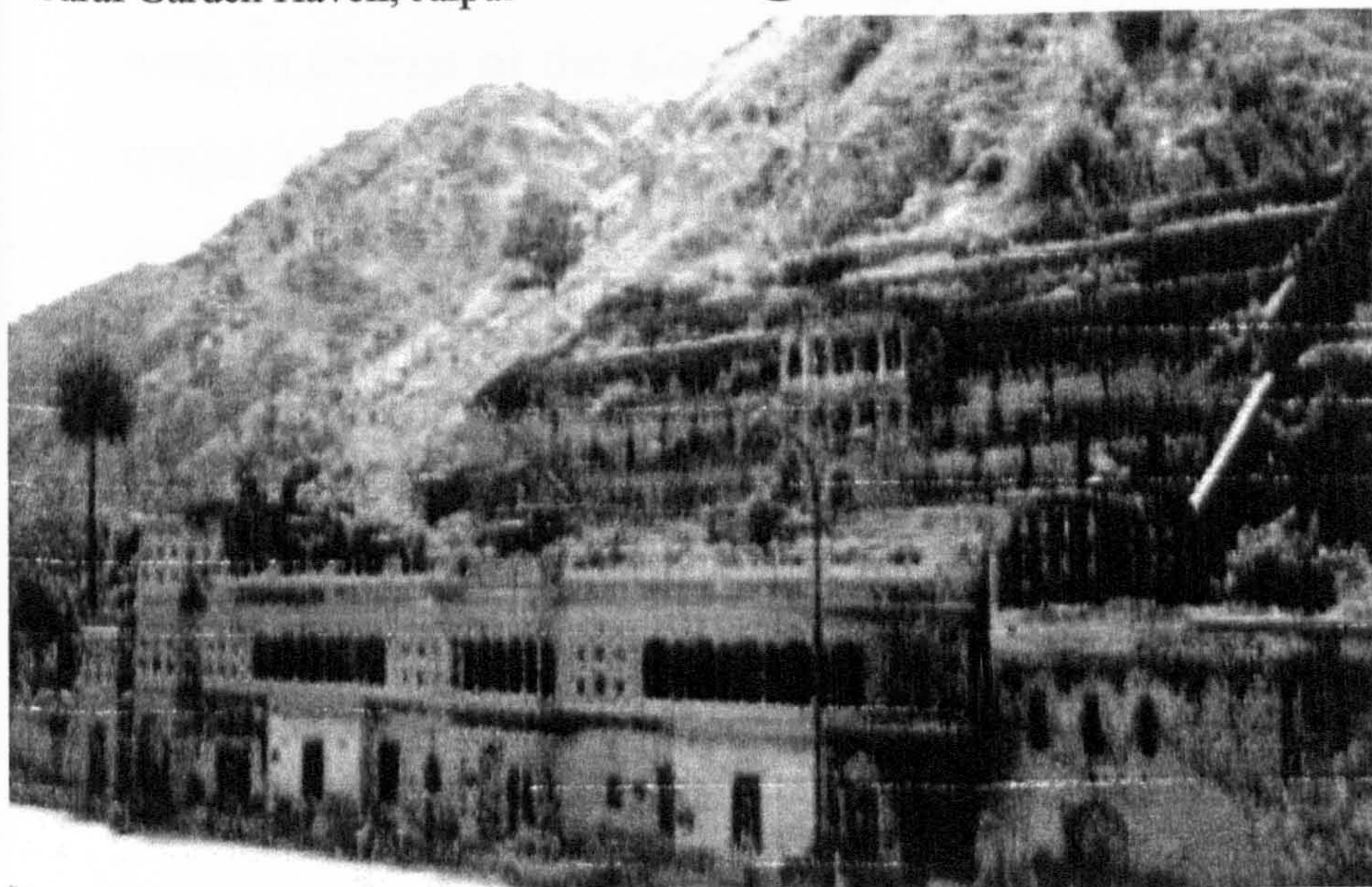
0 10' 50'

**Figure 3.10 - Havelis of Muslim Nobles**

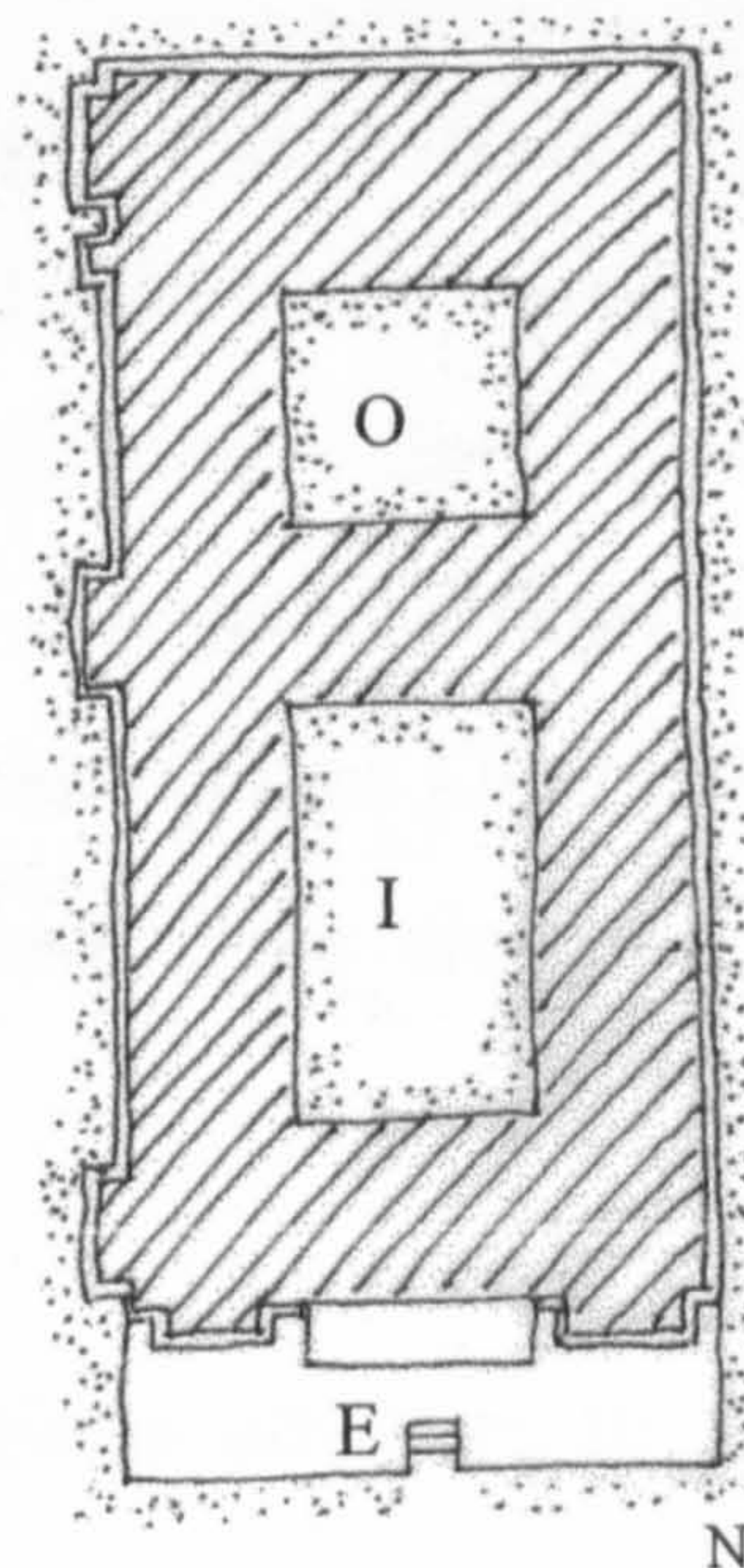




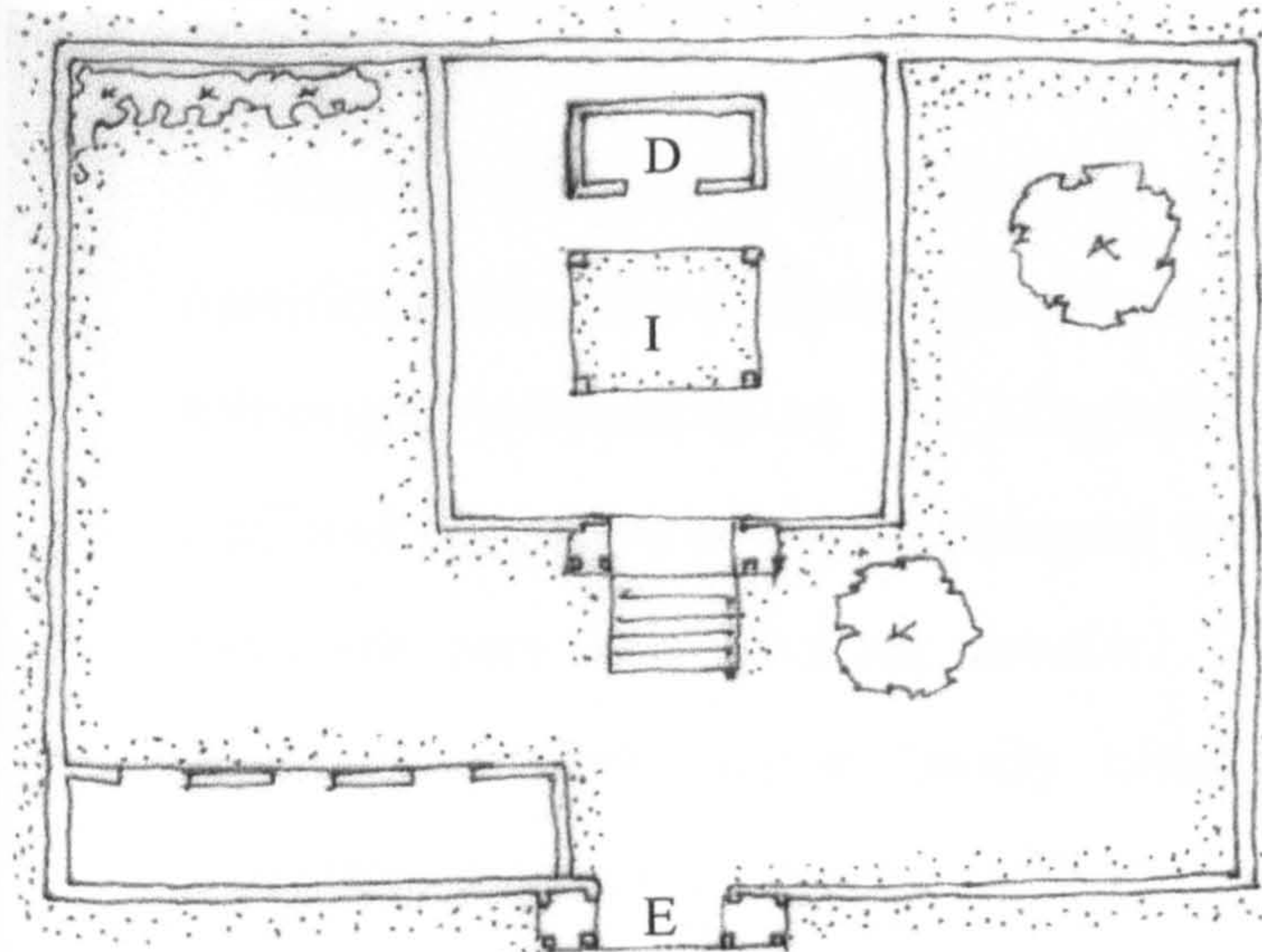
Saraf Garden Haveli, Jaipur



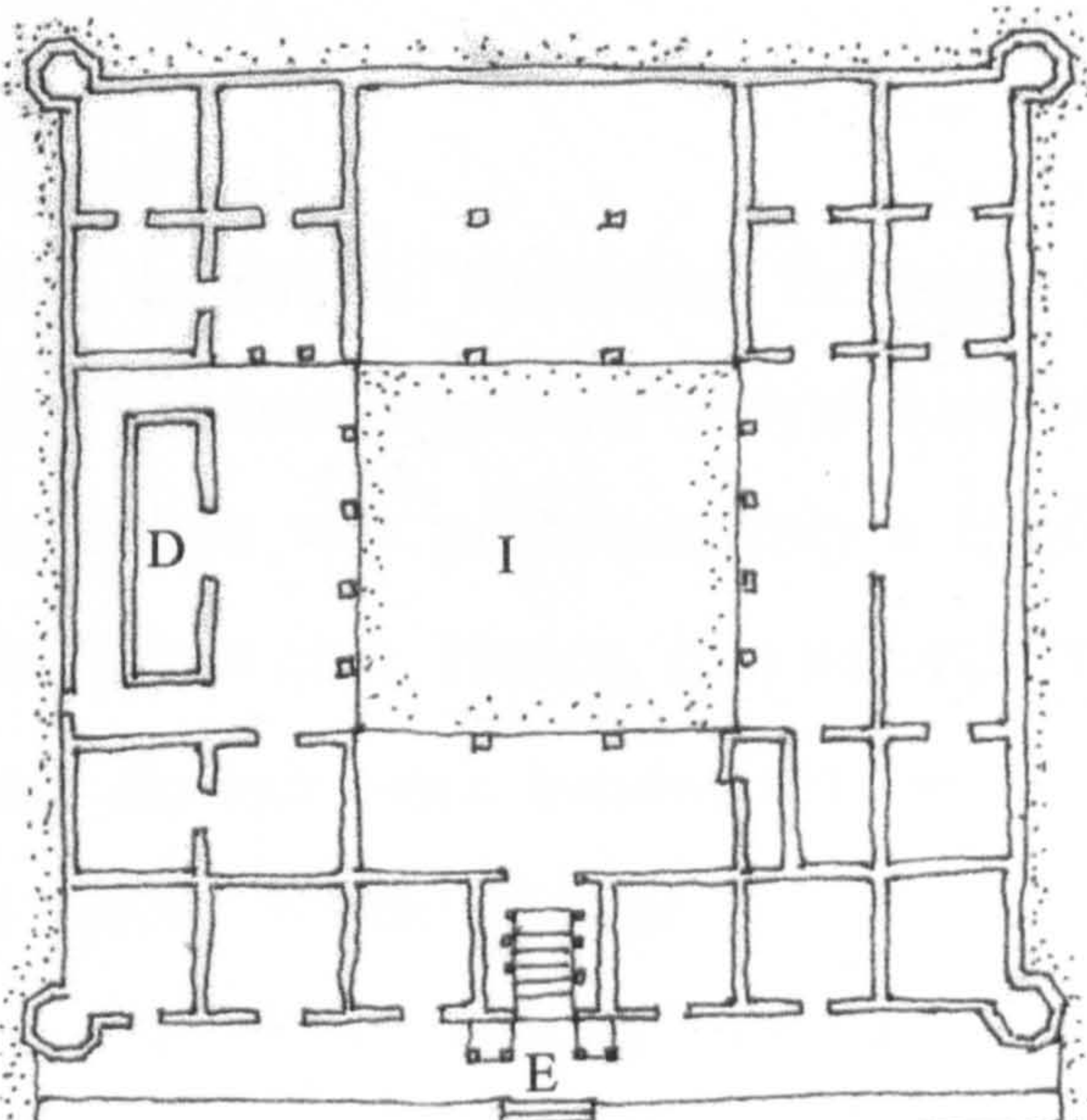
View of Saraf Haveli, Jaipur  
(Ghat Ki Guni, Jaipur, 1996)



Bohra Temple, Pushkar



Ras Bihari Temple, Pushkar



Agarwal Temple, Pushkar

#### LEGEND

Deity - D    Entrance - E    Garden - G    Inner Court - I    Outer Court - O

0 10' 50'

**Figure 3.11 - Temples and Garden Havelis**



4) Besides these three prominent castes, the courtiers belonged to a number of **other Hindu sub castes** such as *Bhandharis*, *Kotharis* and *Dhabhais* (devotees of Krishna). These sub sects were named after the manner in which they served the ruler. *Bhandharis* managed the *Bhandars* (stores) of the rulers; *Kotharis* were in charge of the *Kothar* (treasury) and *Dhabhais* served as the *Dhai Maa* (royal nurses). These *havelis* are present as fraternal clusters or single and double court *havelis* depending on the size of the family.

*Dadupanthi* (another religious sect) also served as religious advisors to the Kachwaha rulers in the Dundhar region. The *dadupanthi* is a strong organization and a number of *haveli* complexes of this sect are found around the Jaipur region. The Sanganer and Rajgarh *havelis* of this sect were covered in the study. They fall in the religious cluster type with façades similar to Rajput *havelis*. These *havelis* were usually constructed by the state and donated to *dadupanthis*. (Figure 3.9)

5) **Muslim Havelis** (Figure 3.10) - Muslim *havelis* in Rajasthan belonged to significant Muslim ministers in the court and to Muslim *hakims* (Royal doctors). Although, influenced by the Mughals, Rajasthan was predominantly a Hindu area and the rulers always belonged to the *Rajput* clan. Hence, it is natural that there are very few Muslim *havelis*. These *havelis* were located on the main streets and were single family clusters likes 'Nawab Sahib *ki Haveli*' at ChandPol Bazaar in Jaipur or Bade Miya *Haveli* in Jodhpur. Similar to the Rajput *thakurs*' *haveli*, the complex had an outer court as stables, another one for *mardana* activities and an inner one for *zenana* along with a *masjid* in the complex. The Muslim inhabitants of Rajasthan were converts from Hindu and most of them observed the Hindu customs as well.



Tonk has a number of Muslim *havelis*. Mahmud Khan's *haveli* in old Tonk built in 1820 A.D. had 3 mosques and seven wells of water. *Purdah* was very important in these *havelis* and the inner court entrance was indirect. The *baithak* was used as an assembly area or for the profession such as *hakim's* (doctor) *haveli* in Tonk. These *havelis* are easily identifiable from their entrance gates. The entrances usually had floral decorations and no figural decorations. At times, they had Arabic inscriptions at the entrance as found in Tonk *havelis*. Astronomical figures of the sun and moon and other planets are painted in Mahmud Khan *Ki Haveli* at Tonk. Although, the Muslim concept of the court relates to garden and paradise; the garden in the court was not found in any of the above *havelis*.

### 3.6 Deviations of the *Haveli* from the Dwelling Type

Besides these *havelis*, that served as dwellings of the courtiers, other types were also found in the fieldwork(Figure 3.11). These include:

*a) Haveli as a garden and leisure place* - This is a type only found in the Ghat ki Guni stretch of Jaipur city. This whole stretch was conceived as a leisure place for recreational activities of the rulers and the nobles. Hence this particular spine in the valley has a number of *havelis* that were used as summer places by the nobles eg. Saraf *Haveli*, Johari *Haveli* etc. Since the design was site specific with terraced gardens, they have been termed 'Garden *havelis*' by contemporary researchers.



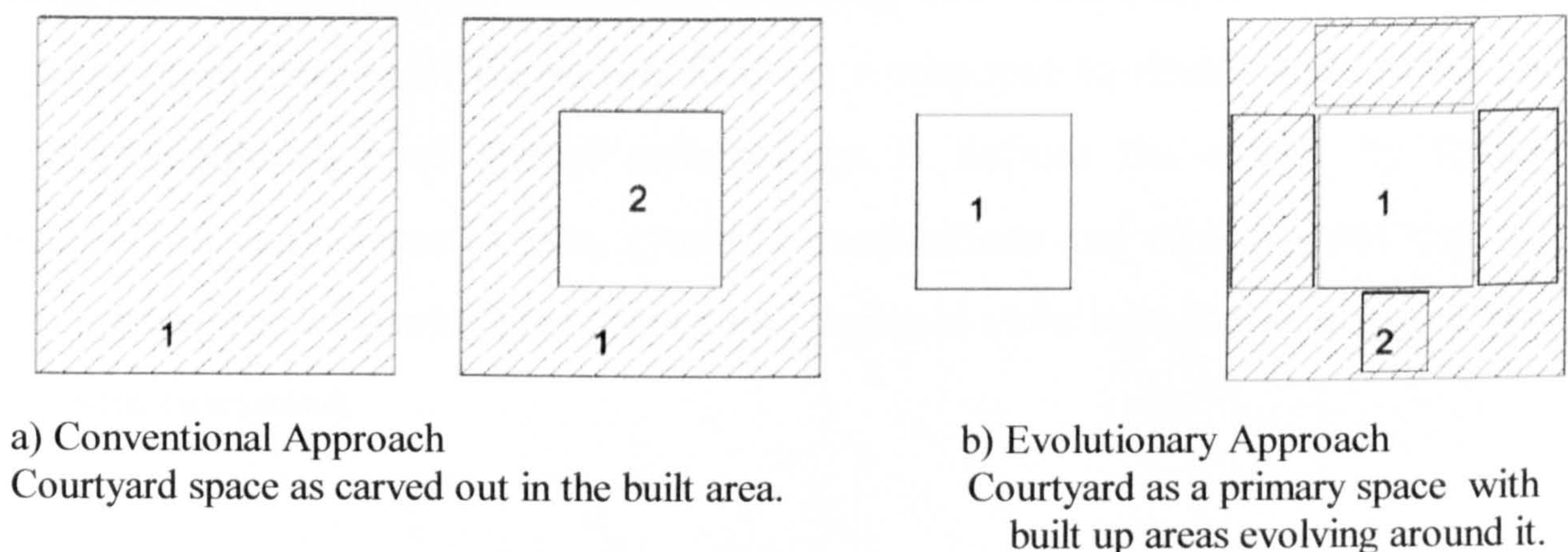
b) *Haveli* as a temple and meditation place - This type was initially defined by the 'Pushti Marg *havelis*' of the Vaishnava sect. It is believed that as a protection of the temples from the Mughals, the Vaishnava sect termed them as *havelis*. In Rajasthan, the most famous *haveli* of this type is the 'Pushti Marg *Haveli*' of Sri Nath Ji at Nathdwara. It is a huge multi court *haveli*. Besides this, a number of temples with courtyards are found in Rajasthan which has lead to the coining of the term '*Haveli-Temple*' by a few researchers. But functionally, these are temples and cannot be categorized as *havelis*. Even the locals associate with these structures as temples. In the religious towns of Pushkar and Nathdwara, the houses or temples cannot be classified as *havelis*. In Pushkar, the temples belong to the Rajputs or Marwaris, and the Brahmins reside in these as caretakers. Some of these are included in the research as they show similarities with the *haveli* form.

To conclude, the majority of *havelis* belonged to the Marwaris (trader class); than the Rajputs (warrior class) and last of all Brahmins (priests) and the Muslim nobles. The form and location of dwelling related to the social status evident in a Rajput *thakur*'s dwelling in the town and in his *thikana*. Also, Marwaris of the Shekhawati region had bigger and grander *havelis* in their own hometowns. Form was an outcome of the social, political status in a particular geographical location. Decorum was maintained even in the construction process. Since the form and typology are specific to the owner's status and requirements, caste seems an ideal criterion for classification of the *havelis*.



## 4 Rituals and Spaces inside the *Haveli*

Conventionally, the *haveli* spaces have been studied as part of an introverted plan overlooking a courtyard. Previous research works have always studied the *haveli* plan as a single unit and the evolutionary development of individual spaces has been ignored. Significance of the courtyard space has been discussed in a dwelling as a symbolic *brahmasthan*, as a climatic requisite and as a social space, but an analysis of the ritual behaviour that explains the evolution of the *haveli* spaces has been neglected. In contrast to the previous research works, the spatial analysis in this study is based on the evolutionary aspect. This chapter focuses on the spatial evolution of the *haveli* plan and describes a sequential development of the plan from the single point of reference i.e. the centre of the inner court. The difference in the two approaches is explained in Figure 4.1.



**Figure 4.1 - Different approaches to spatial evaluation.**

Previous analysis consider the courtyard space as being carved out in the plan form and it becomes secondary to the built form whereas the evolutionary approach shows courtyard as the primary space with other secondary spaces evolving around it as per the needs of the family. This process of spatial analysis



not only interprets the conception of the *haveli* spaces but also places them in order of their hierarchical significance and derives the generic principles guiding the spatial form.

The formal resemblance of a typical Indian courtyard dwelling plan with that of a *Vedic* altar is striking. Kapila Vatsayan describes the origin of Indian architecture in *Vedic* altars. According to her 'The various aspects of the ritual of *yajna* and the prescribed *vidhi* became the solid conceptual foundation of architectural ground plans throughout the country over a period of 12-14 centuries.'<sup>1</sup> Two more meanings of the term *Jaag* (local term for house), besides the ones mentioned in the previous chapter are given in a dictionary of Rajasthani language - '*yajna*' (fire ritual) and '*vivaah*' (marriage). This also indicates the significance of rituals in the dwelling unit. These ritual foci are the generators of primary spaces in the dwelling unit. This chapter deals with the spatial configuration of the *haveli* form as a response to rituals and studies the etymological origin of spatial terminology. It defines the spaces by finding parallels in ritual demarcations, symbolic associations and etymological roots. In the last section of this chapter, a few sub regional variations in the *haveli* spaces are also discussed.

Although these aspects of spatial evolution are evident in the Indian philosophy yet they have never been interpreted in the actual dwelling form. The Indian world view accepts the centre or *bindu* or *bija* as the point from where everything emanates and where everything merges. The centre absorbs and disperses all contradictory energies. Also, the expansion of *bindu* is stabilized in the square – which is called the *muladhar* (literally root base). This view is

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<sup>1</sup> Vatsayan, Kapila, 1991, p.73



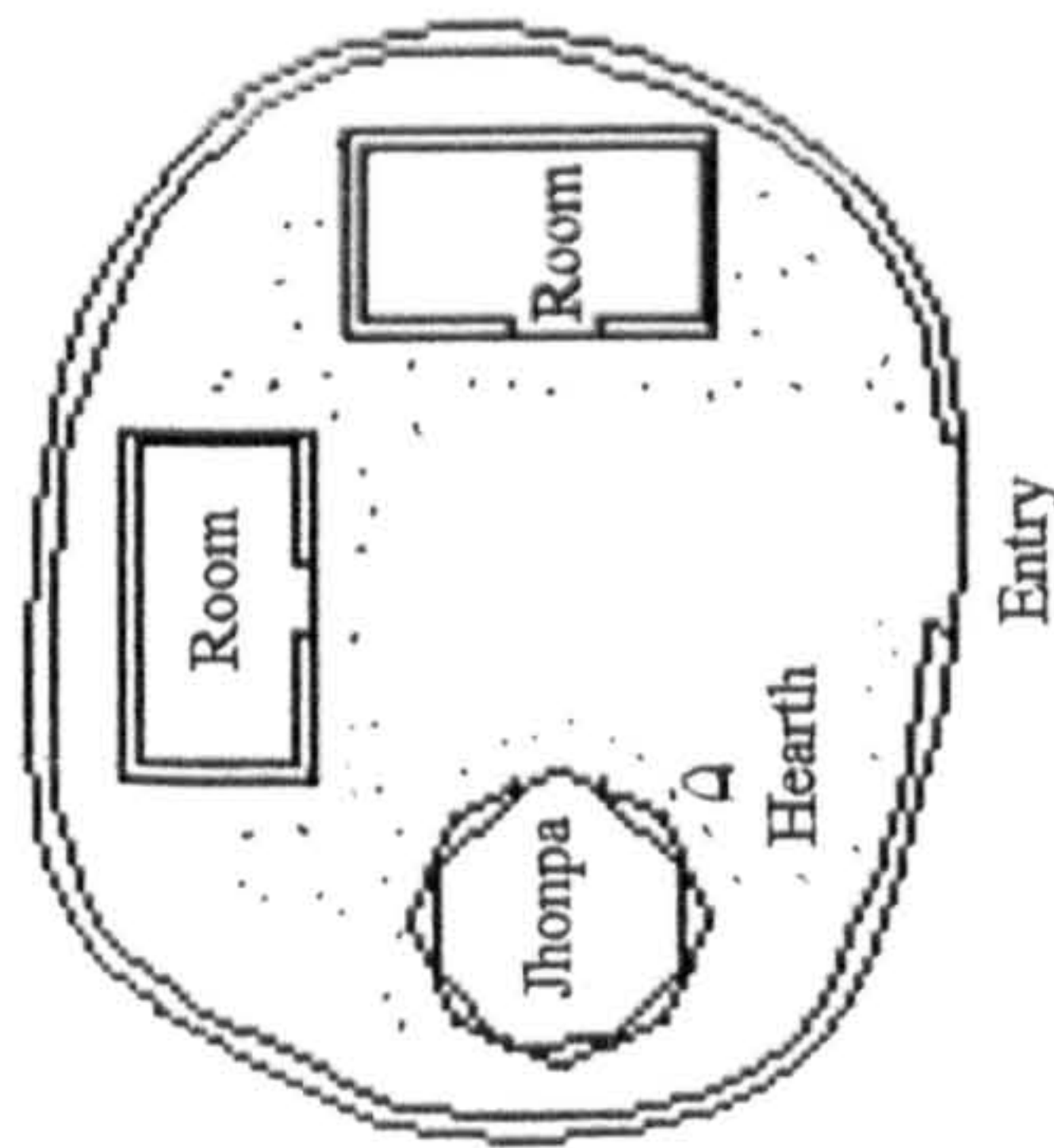
reflected in the square court of the *haveli*. The spatial structure of a dwelling unit, if analyzed at a local level, begins with the location of the centre and demarcation of the territory (marking of four corners) to define the place. This determines the generic core of any *haveli*. Even in case of an irregular plot, the central *chowk* (court) is always square or rectangular with the built form as a residual of the plot size and the court – thus establishing the *chowk* as the primary space. Assuming the growth of a dwelling unit from inside outwards, the courtyard evolved as a basic space for a traditional family unit.

## 4.1 The Centre – *Chowk* as the Primary Space

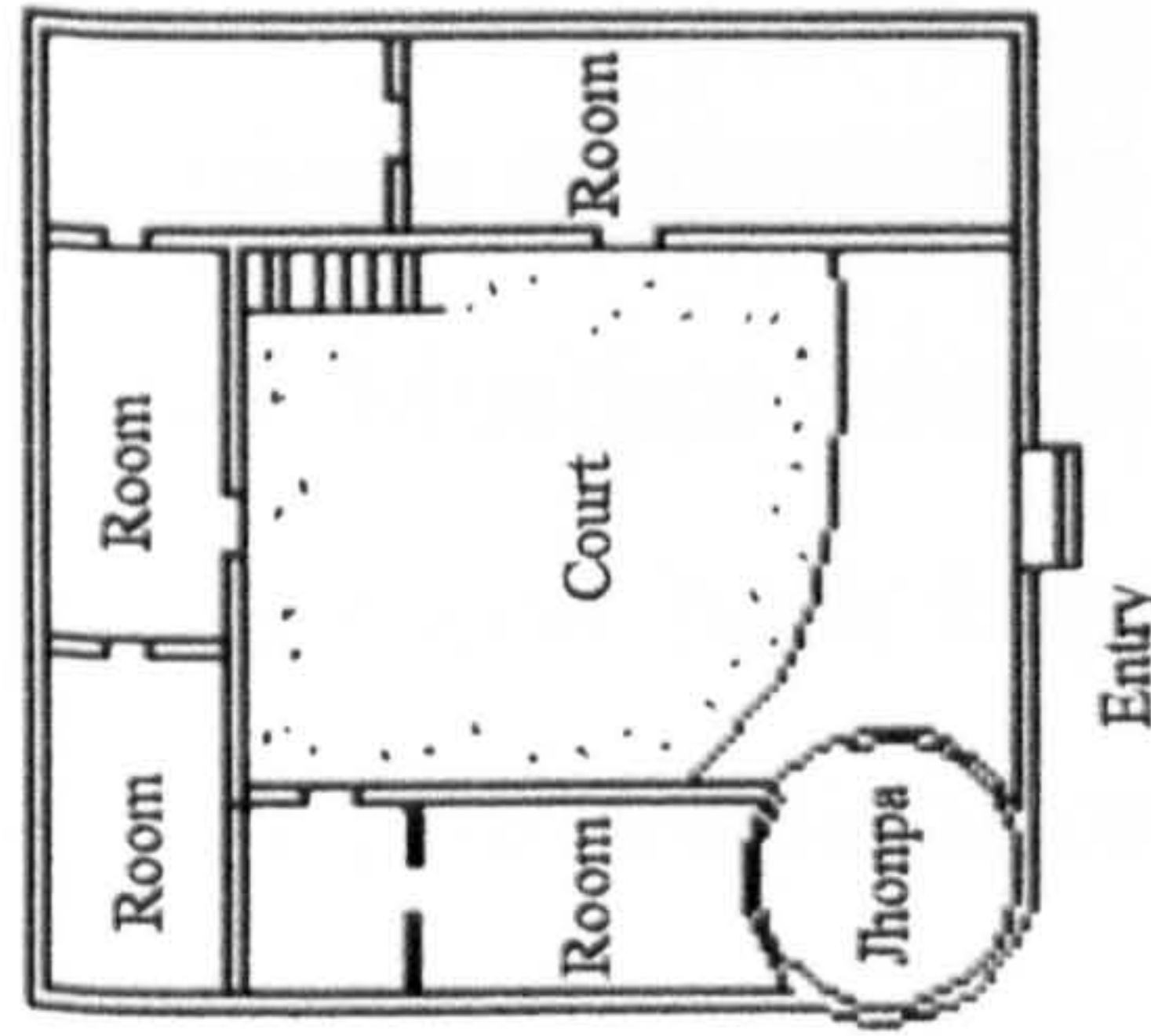
### Etymological Roots

In the concentric plan of a courtyard type dwelling, the locus of the spatial evolution is the centre of the court. This initial central demarcation is evident even in the rural house form of this region that gradually evolved into the single and double court *havelis* (Figure 4.2). The origin of this urban form from the rural prototype is evident in the form and etymological roots. The rural yard called *bara* (literally, an enclosed opening in an agrarian dwelling to demarcate the territory) was the origin of the '*chowk*'. Incidentally, it coincides with the Arabic term *baha* which also means open space. Etymologically, *chowk* is a Hindi term meaning 'a central space of gathering that has four corners.' In Indian context, this term is used for any gathering space at the level of the city, the cluster and inside the *havelis*. The significance of the social centre as opposed to the physical one is revealed in an interview with a *haveli* resident. Although residing in a modern apartment, the family members call the living room as '*chowk*' as it is a social centre of gathering for the family.

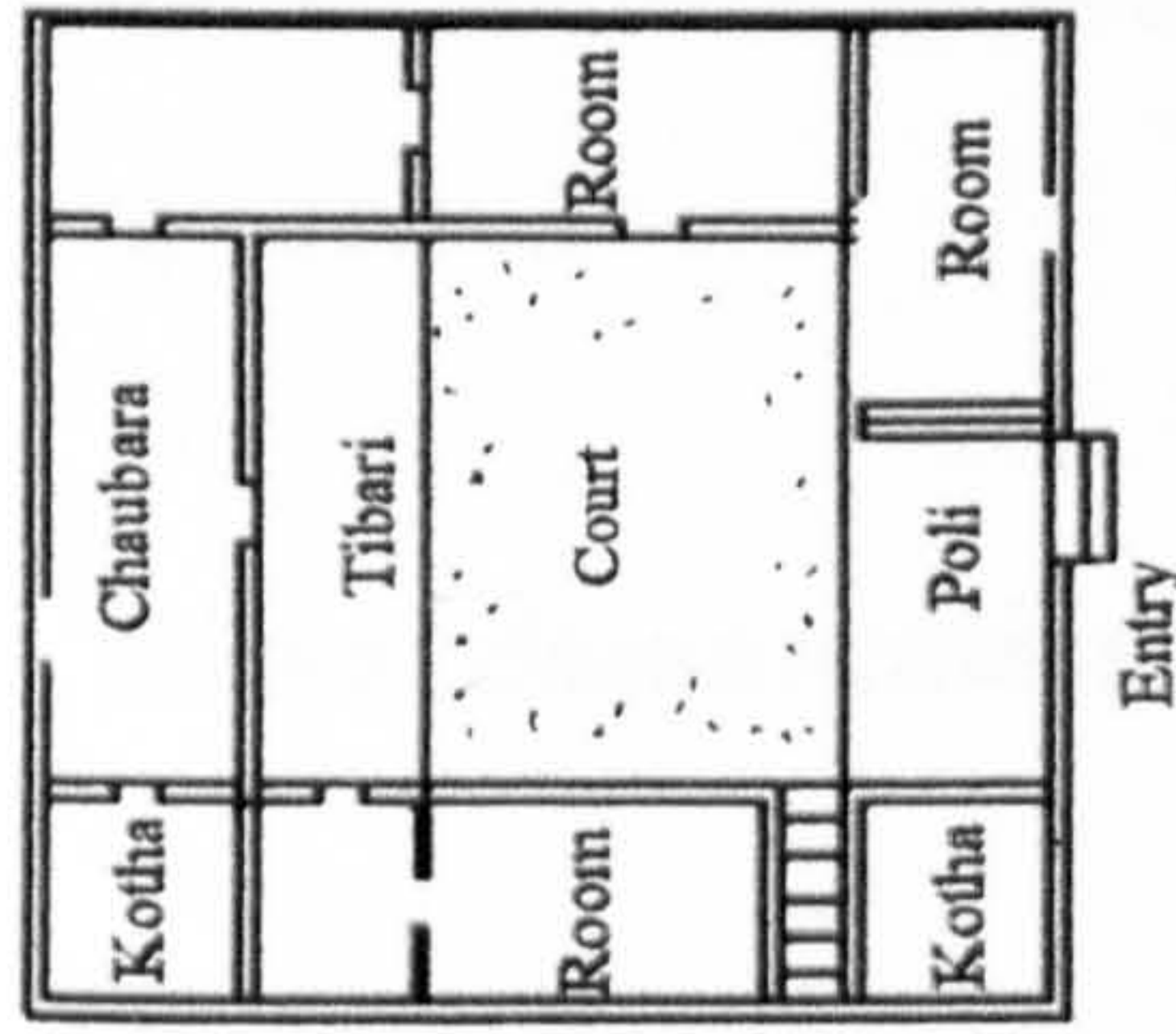




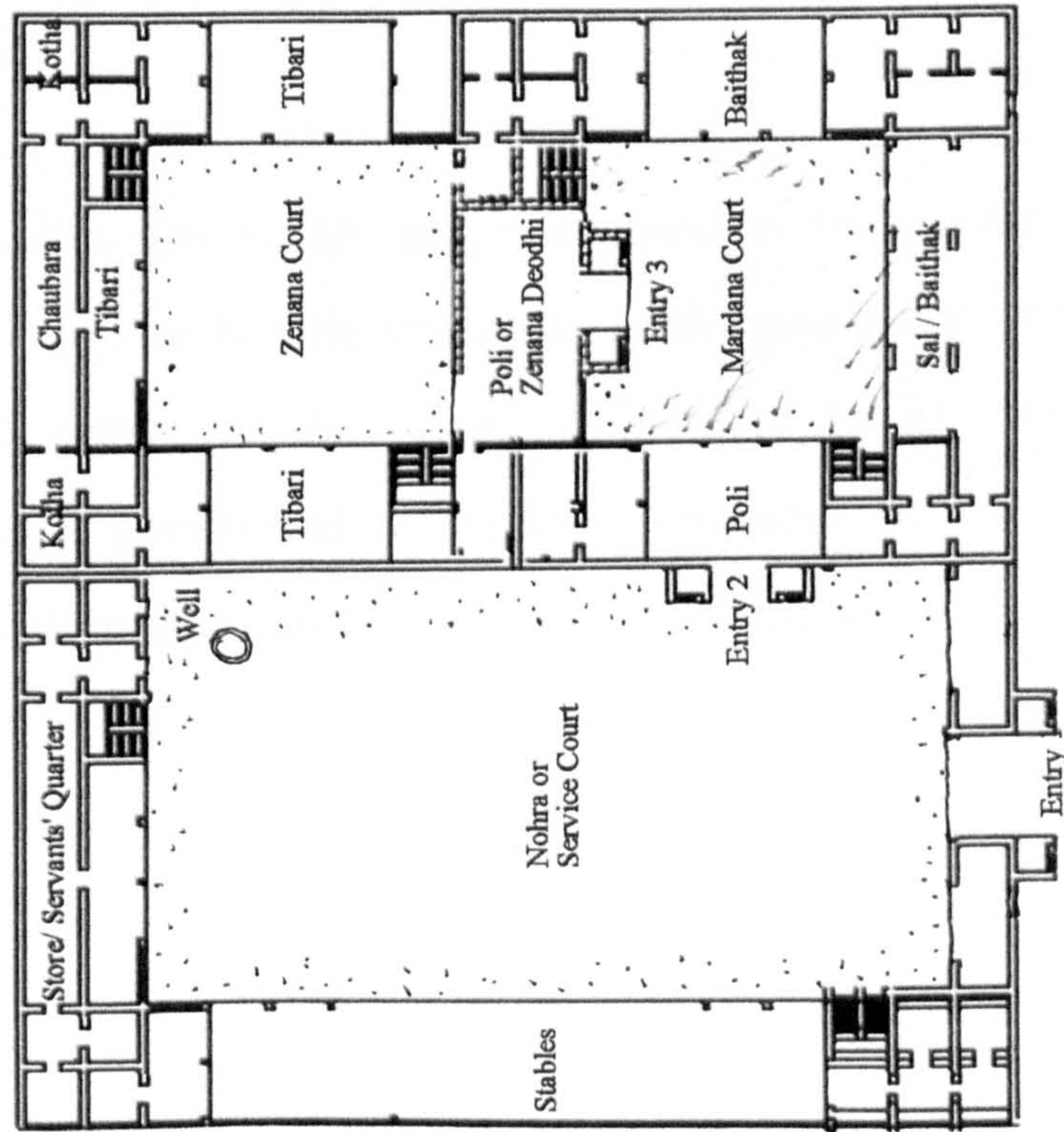
Rural house form in Rajasthan



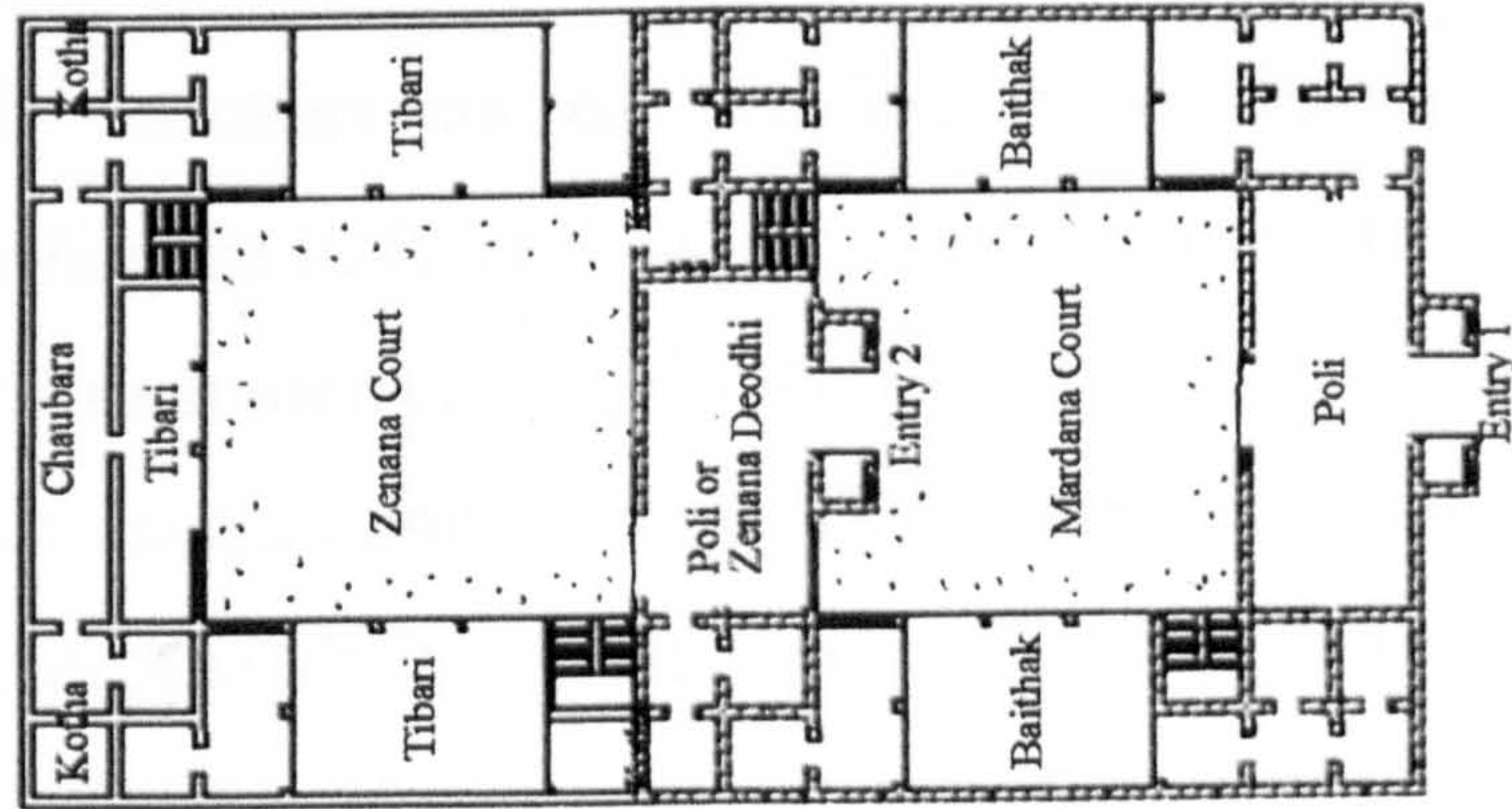
Development of rural house with a court.



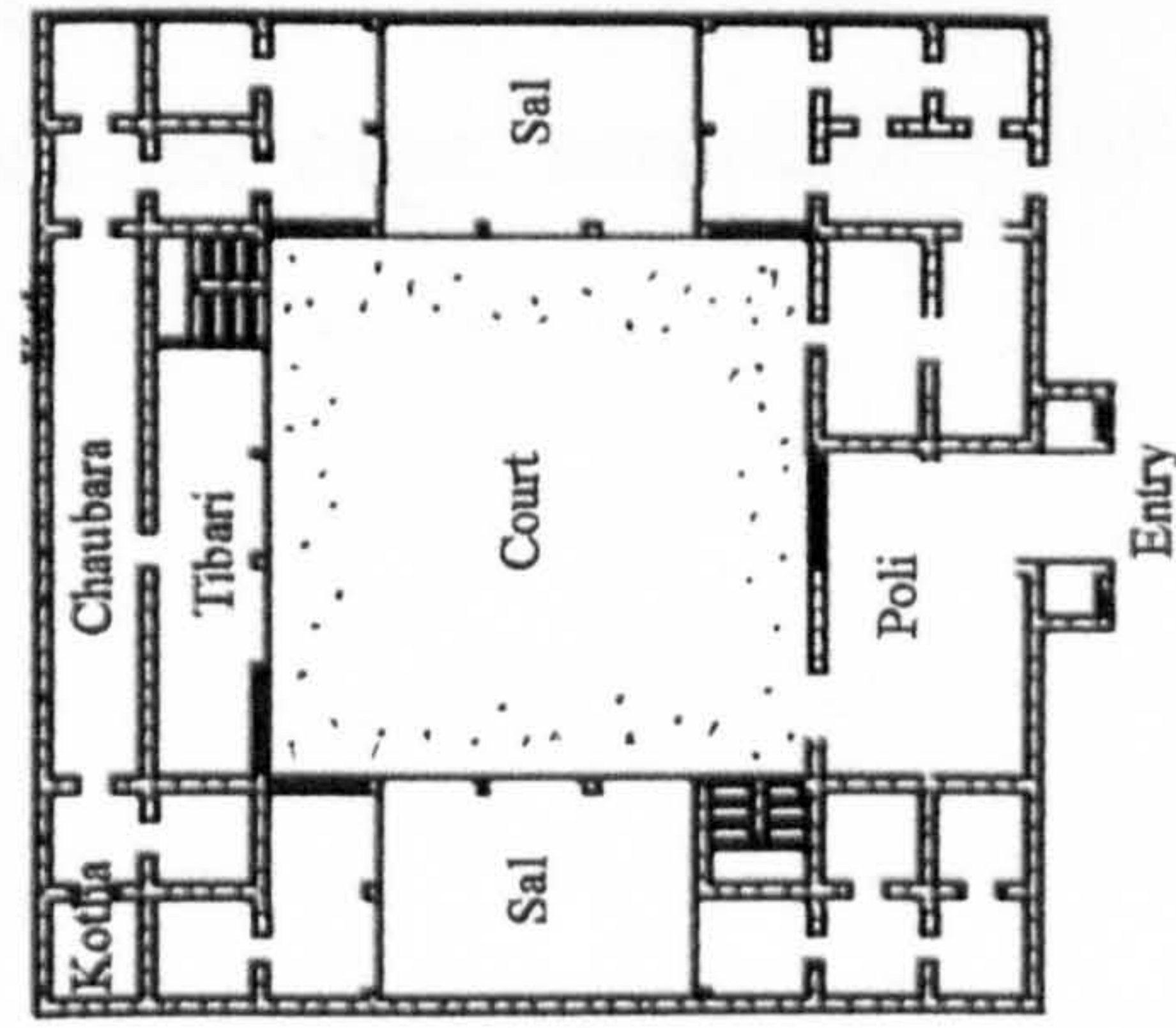
A pucca rural house in masonry



Expansion into a three court haveli complex



A typical double court haveli



A typical single court haveli



In a Hindi dictionary one of the meaning of this term *chowk* is *Bada vedi* i.e. a big altar used for *Vedic* fire rituals. This indicates the ritual associations of this space.

### **Ritual demarcation of the centre**

Traditionally, the ritual activities in a *haveli* have been of three kinds – the daily rituals of the family members in the *haveli*, family rituals related to birth, marriage and death of family members and the seasonal rituals linked to the festivals. The majority of the *havelis* in Rajasthan originally belonged to Hindus (Brahmins, Rajputs, Marwaris or trader class, Dhabhais etc.) except a few that were owned by the Muslim ministers and *hakims*. The rituals followed in all Hindu communities are more or less similar, with slight variations. The majority of Muslims residing in Rajasthan region were converts from Hindus. They followed both Hindu and Muslim customs and called both the *pundit* and the *qazi* for religious ceremonies.

In a typical Hindu dwelling, the fire rituals are performed in the centre of the *chowk*, clearly demarcating it as the hearth space. In each *haveli*, the centre or the origin is marked in the centre of the court, which can be identified by locating the altar for fire-rituals performed on various occasions by the family. Thus, it is easy to trace the origin of a multi court *haveli* by identifying the main ritual court. The significance of *chowk* as a ritual space is repeatedly expressed in the performance of all rituals during festivals, birth, marriage and death ceremonies of the family. Evidence of these ritual performances is found in texts, and interviews with the *haveli* residents. Rama Mehta in her book *Inside the Haveli* describes the rituals at the birth of a child in Sangram Singh's *haveli*



courtyards. She talks about the *havan* being performed in the *zenana* court with the men entering at an auspicious time for the ritual and returning back to the *mardana* court for feasting and entertainment by the family performers in the evening. The continuity of these traditions is evident in her statement 'In the courtyards for 300 years, birth, marriage and death ceremonies had been performed.'<sup>2</sup> During the fieldwork, a number of *haveli* owners such as Hathiram *Haveli*, Jodhpur and Bohra *Haveli*, Jhalawar acknowledged that the wedding fire rituals (*Pheras*) in the family are performed in the centre of the *zenana* court till today. Other research works and fiction also mention the significance of *chowk* during these ceremonies. Sunand Prasad (1987) describes a scene of his uncle's death ceremony in the *chowk* of Sahranpur *haveli*. *RasKapur*, a hindi fiction on Jaipur, about the period of ruler Jagat Singh describes the *Paanigrahan* (wedding ceremony) of Jagat Singh in the *chowk* of Geejgad *Haveli*. Amongst Muslims too, the wedding ceremonies and annual religious feasts took place in the courtyard.

The performance of the ritual of *Bhumi Pujan* before the commencement of construction and *Griha Pravesh* or *Vastu Shanti* before entering the new house also recognize the central space of the dwelling. The Alwar Gazetteer mentions a ritual similar to *Vastu Pujan* performed by the *Qazi*. Tanseem Choudhury (1992), in her research on Muslim dwellings, mentions that before moving into the dwelling, a *mullah* or two *madrassa* students are called to recite the *Quran* in the courtyard. In interviews with Muslim *haveli* residents, it was found that they invite acquaintances for a *Quran Khawani* recital of verses from *Quran* at the time of laying the foundation stone.

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<sup>2</sup> Mehta, Rama. 1977, p.58






The centre of the court is converted into various altars (*Havan-Kund, Mandap* etc.) related to the specific ritual. The centre is also demarcated during the festivals and ceremonies of the *haveli* with various flooring patterns called *mandanas* (made with a mixture of red earth and cow dung). The owner of Bade Devta *Haveli* in Kota mentioned that the bride and groom sat on the *rangoli* or *mandana* pattern in the centre of the court. The Shekhawati *haveli* courts were *kuchha* (unpaved) so that the ritual of washing and plastering with cowdung is possible before making the *mandanas* for festivities. In Bapna *Haveli*, Jhalawar the floor of a room was left *kuchha* just for this purpose. This superposition of the ritual centre - *havan kund and mandap* and the social centre (place of gathering eating, etc.) with the centre of the *chowk* establishes it as the primary space.




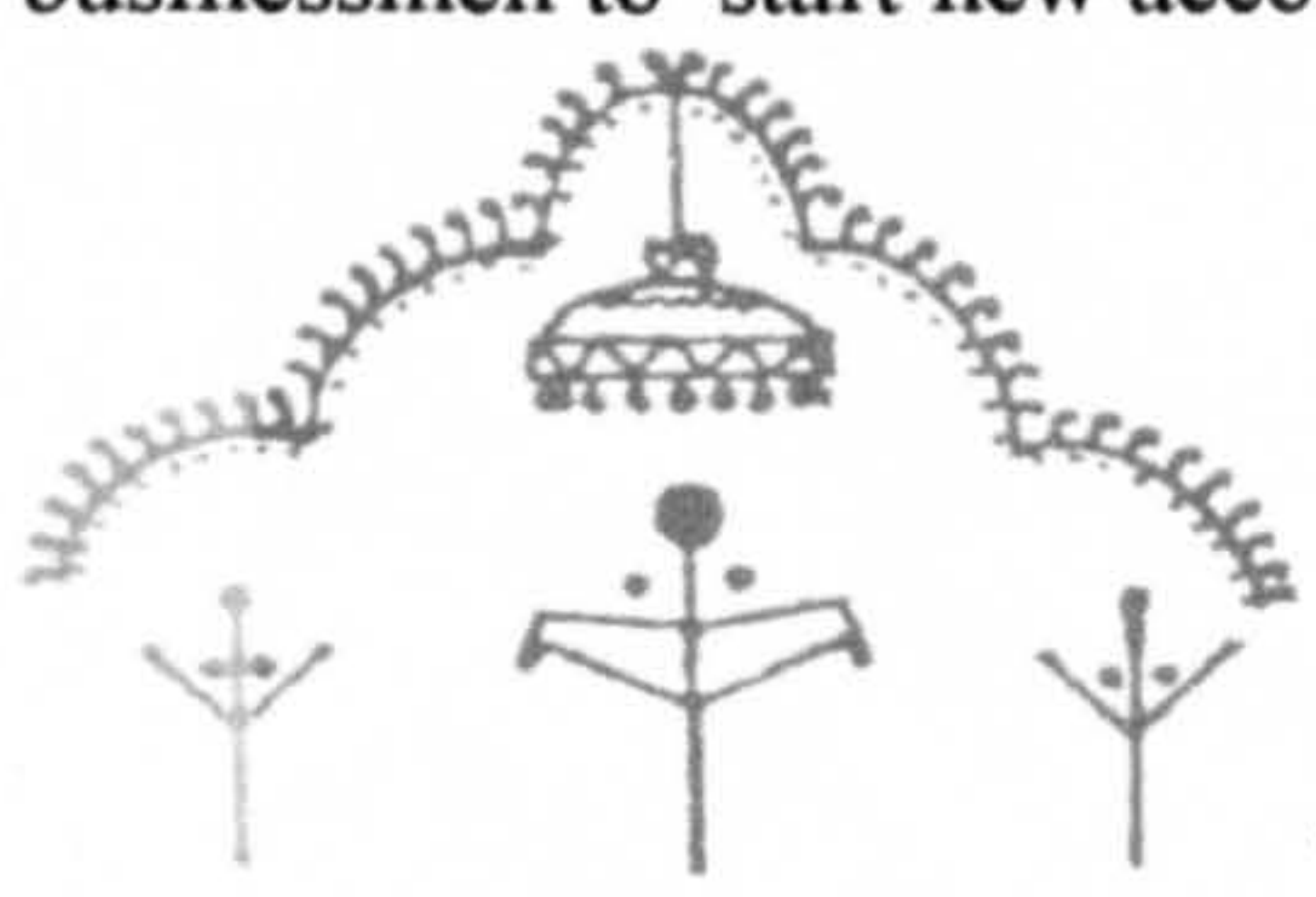

In bigger multi court *havelis*, there are separate courts for female gatherings and rituals, male gatherings and for servants and services. This segregation is related to the rituals and activities of each sect. In such *havelis* the centre or the ritual court is always the innermost *zenana* court – the first one to be defined in any *haveli* layout. Thus, in all rituals the court is the altar and the life of the family members revolves around this space. Sunand Prasad (1987) mentions that in a Hindi dictionary, the meaning of a house is given as the female of the house, *grihni*. The rituals also establish that the female section is the core or centre of the *haveli*. This ritual core exists as the primary space in all *havelis* of Rajasthan, irrespective of caste, religion and region. Table 4.1 shows the ritual demarcations in the *chowk* during different occasions in the *havelis*.



**Table 4.1 - Ritual Demarcations in the *Chowk* Space.**

FESTIVALS	RITUALS	MANDANA PATTERNS
Griha Pravesh	A <i>havan</i> is performed in the centre of the <i>haveli</i> court.	
<i>Athmasa</i> – Eighth month of pregnancy.	<p><i>God Bharna</i> – placing sweetmeats in the expectant mother's lap.</p> <p>Adjoining figure shows the '<i>mandanas</i>' made in centre of court at <i>athmasa</i>.</p>	
Birth of a child	<p>The placenta is disposed in an earthen pot with a betel nut and buried in the courtyard near the door of the room used for delivery.</p> <p>On the 10<sup>th</sup> day is the 'Suraj ceremony' when the mother and child are given bath and they come out to see the sun. The puja and parinda space is cleaned and a 'havan' is performed in the courtyard.</p> <p>Adjoining figure shows <i>mandanas</i> on the floor during this function. (Source: Jogendra Saxena)</p>	 <p>(Jogendra Saxena, 1979)</p>
<p>Marriage Ceremony</p> <p>a) Hindus</p> <p>b) Muslims</p>	<p>Several ceremonies with <i>mandanas</i> for each occasion and a final one for the wedding day. The marriage takes place in the bride's house. The main <i>mandap</i> is made in the centre of the inner courtyard where the <i>phera</i> ceremony is held. Various <i>mandana</i> patterns are drawn on the floor of the courtyard and the centres of entrance room and other rooms. On homecoming of bride- A '<i>Pasarna</i>' - a huge flooring pattern with 7 <i>salavars</i> is made.</p> <p>Weddings usually take place in the bride's home. The men receive the new bridegroom and his party in the outer court. A <i>maulvi</i> and two witnesses first ask the groom's consent, then are escorted into the <i>haveli</i> to hear the bride's consent. Marriage prayers are held among the men. Only after the marriage has been solemnized is the groom taken into the courtyard to sit next to his bride. The women then carry out some wedding rituals, before the bride leaves with her husband.</p> <p>The incorporation of the bride into her husband's family is marked with a ritualized entrance into her husband's home. There will be some special rituals in the <i>deori</i> of her husband's home, again carried out by the women of the family, to welcome her into the family and to make her entry into the homestead auspicious. This may take the form of reading a passage from the Holy Quran or more elaborate celebrations.</p>	 <p>Mandana for marriage, Bundi (Jogendra Saxena, 1979)</p>
<p>Death Ceremony</p> <p>a) Hindu</p> <p>b) Muslims</p>	<p>The dead body is kept in the courtyard and family members go around it to pay their respects. Few days later, a <i>havan</i> is held in the court.</p> <p>After a family member dies, the body has to be washed and wrapped in a shroud according to Islamic injunctions. This usually takes place in the courtyard. For a female, a portion of courtyard is screened off, while women wash her body. Water is collected in a hole dug in courtyard.</p>	



<b>Table 4.1 (Contd.) - Ritual Demarcations in the <i>Chowk</i> Space.</b>		
FESTIVALS	RITUALS	MANDANA PATTERNS
<p><i>Makar Sankrant</i> and <i>Holi</i></p> <p>January and March.</p>	<p>The first is a festival to celebrate the peak of winter and <i>Holi</i> is celebration of good over evil related to a myth of Holika and Prahlad. Adjoining photograph shows a floor pattern made during <i>holi</i> in Bundi.</p>	 <p>(Jogendra Saxena, 1979)</p>
<p><i>Gangaur</i></p> <p>March-April</p>	<p>Most celebrated festival in Rajasthan for newly married and unmarried females. Gangaur processions were carried in all medieval towns and it is still taken out in Jaipur and Udaipur. Gauri (Lord Shiva's wife) is worshipped.</p> <p>Adjoining picture shows the floor pattern that represents this festival</p>	 <p>(U.B. Mathur, 1968)</p>
<p><i>Nagpanchami</i>, <i>RakshaBandhan</i> and <i>Teej</i></p> <p>July-August</p>	<p><i>Nagpanchami</i> figures in <i>Puja</i> room . Bohra <i>Haveli</i>, Jhalawar</p>	
<p><i>Diwali</i></p> <p>October-November</p>	<p>To welcome Lakshmi, the goddess of wealth. A time for businessmen to start new accounts.</p>  <p>'<i>Chulhe ke Bhaironji</i>'</p> <p>Figure made near the cooking stove during <i>Diwali</i></p>	 <p><i>Mandana</i> (Jogendra Saxena, 1979)</p>



## Symbolic Significance of the Centre

These ritual practices find parallels in the traditional text *Rajvallabha*, which states that the centre of the dwelling should be identified and then celebrated with a *havan* or fire ritual before being used; a fact that was reinforced in the interviews with the masons as, it was the first point to be demarcated before commencing the construction of any *haveli*. This aspect is further explained in Chapter Six. In the regional texts like *Rajvallabha* the central court signifies the earth and is known as the *Brahmasthan*. The texts also indicate the growth of the form from centre as “the ritual process of the allocation of the divinities on the *Mandala* is conducted in three stages, from the inner, to the middle to peripheral plots, on a grid of squares constructed by lines that run from East to West and North to South”.<sup>3</sup>

Connotations of birth and marriage are present in all rituals. Construction of building is interpreted as the earth being fertilized by the householder and the building being born. This indicates a symbolic association where man equates the creation of universe by god with the construction of dwelling. Ismet Khamatta in her article ‘The meaning of Residence in Traditional Hindu Society’ in *Dwellings, settlements and Tradition* explains the symbolic significance of a dwelling. According to her, the altar is the domestic hearth, the navel of the earth and the womb of the house. Earth is associated with female and fertility. Fire is the means of linking the two polar opposites – earth and sky, man and woman; hence its use in all rituals.

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<sup>3</sup> Chakrabarti, Vibhuti.1998,p.77



## 4.2 Access to the Centre – The Entrance

### Etymological Roots

The next step after defining the centre is marking the entrance or the access. A great significance is given to the entrances to this inner court of the *haveli*. In single court *havelis*, this serves as the main entrance. The local term for the entrance gate is *pol* from the Sanskrit word *pratoli* and the entrance lobby space is called *poli*. This lobby space is of two kinds in the Rajasthan *havelis* – direct or indirect with a baffle wall. In the inner *zenana* court, the *poli* often has a baffle wall with a small *bari* or window to peep through. This space varies with the *haveli* type. The difference in the *haveli* entrances due to caste is explained in the previous chapter (See Appendix – C for entrances of the *havelis* covered in the fieldwork). The indirect entrance is to protect the privacy of the inner court. This served a social function of the visual barrier between inner and outer court – thus protecting the privacy of females in the inner *zenana* court. In Jaipur *havelis*, the door of the *poli* is one and a half times the normal door of a room. Hence, *poli* is also called *deodhi* (meaning 1 ½ times wider than the normal opening) in local language. Other local terms related to different parts of entrances like *gokha* or the sitting platforms at the entrance and *dehli* or threshold stone etc. are explained in Table 4.3 at the end of the chapter.

### Ritual Demarcation of the Entrance

The entrance is also demarcated with wall paintings, *bandanwars* (a row of Mango leaves tied in a thread) and *mandanas* on all occasions. The cultic rituals related to festivals, birth of a son, marriage of a daughter or any other auspicious



occasion are all expressed symbolically at the entrance doors. In all Hindu *havelis*, the floor at the entrance is the first place to be marked before commencing any cultic ritual, a way of welcoming the particular deity. *Mandana* or *rangoli* (Flooring patterns made with cow dung mixed with red earth) is used by the house wife to herald the sun and welcome the early visitor every day. The path from the entrance to the seat of the deity or the fire altar during the rituals is defined by another set of flooring patterns called *paglya* (*Pag* = footsteps). These might be actual drawings of the feet or mere representations. Table 3.2 describes this demarcation on different occasions. These are drawn in front of the door, so that while passing one steps on them. An interesting observation by Jogendra Saxena (1979) compares *paglyas* made by a *Brahmin* housewife and those made by a *Vaishya* (trading class) housewife. The footsteps made by the *Brahmin* housewife are always pointing inside as moving into the house. The footsteps made by the *Vaishya* housewife point outwards moving out of the house as their husbands are always on the move due to trading. In case of a Muslim house, the main entrance door faces the Kaaba and when it is installed, the sister of the head of household ties a thread around his wrist.<sup>4</sup>

Besides, being a physical access point, the entrance is also a source of communication with the outside society. It is like an information board of the events happening inside the *haveli* – as the joys and sorrows, festivities etc. are all shared with the rest of the community by the symbols painted outside the entrance. In Rajput and *Brahmin havelis*, the niche at the top of the entrance is reserved for the *kul-devi* (clan-goddess), thus informing outsiders of the particular clan of the owner, serving the purpose of a nameplate. In case of a

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<sup>4</sup> Sinha, Amita, 1989, p.134



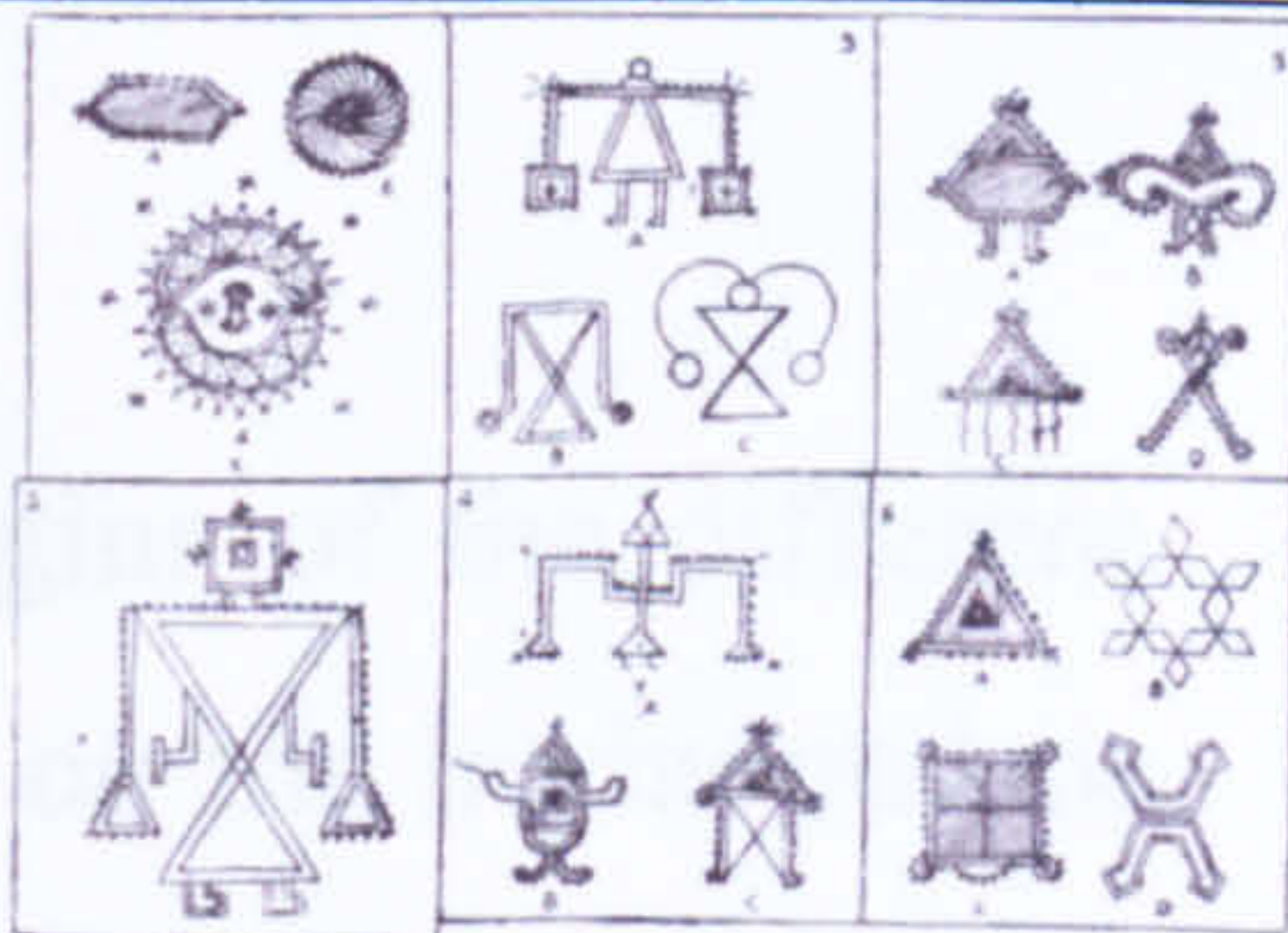

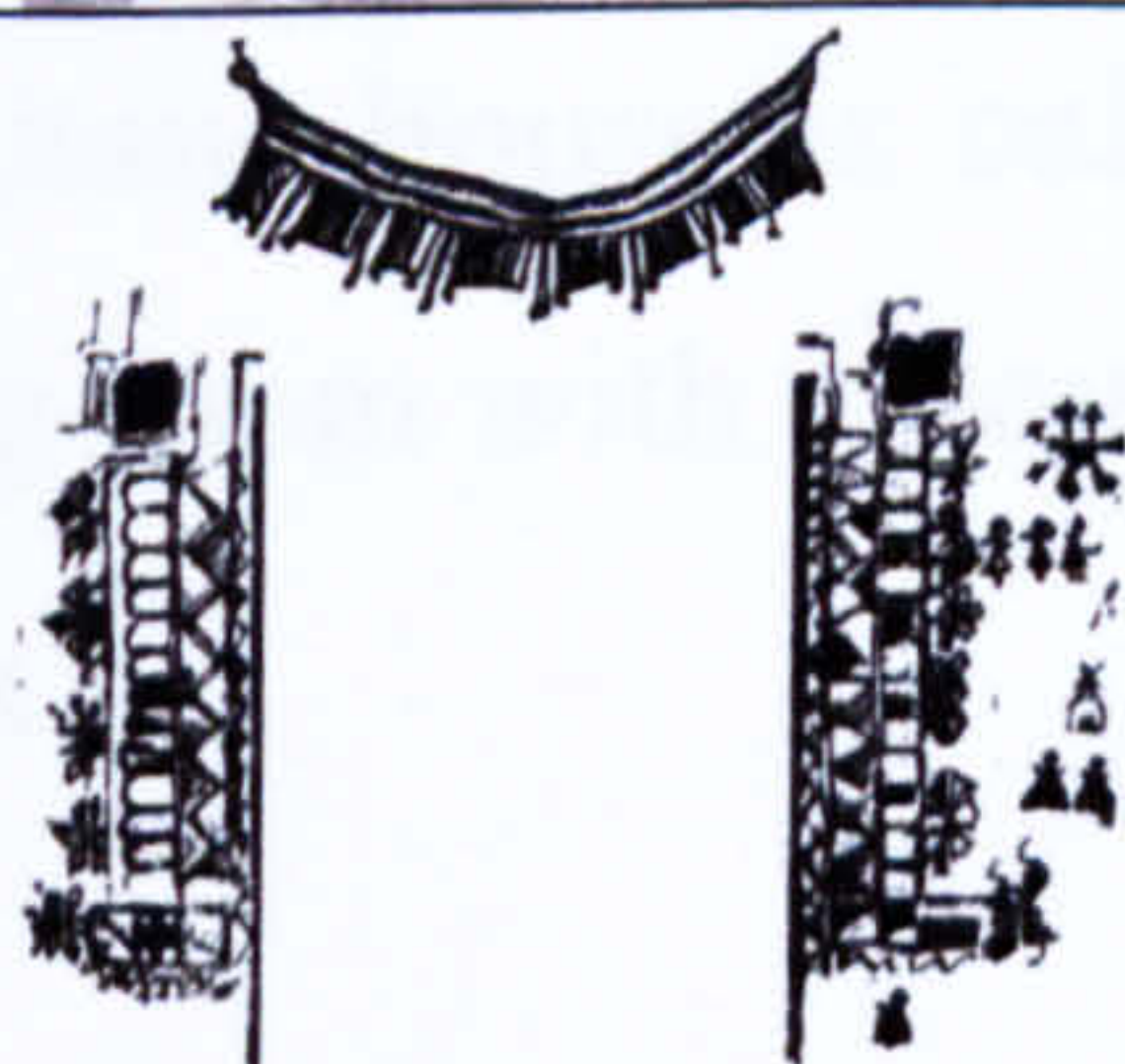
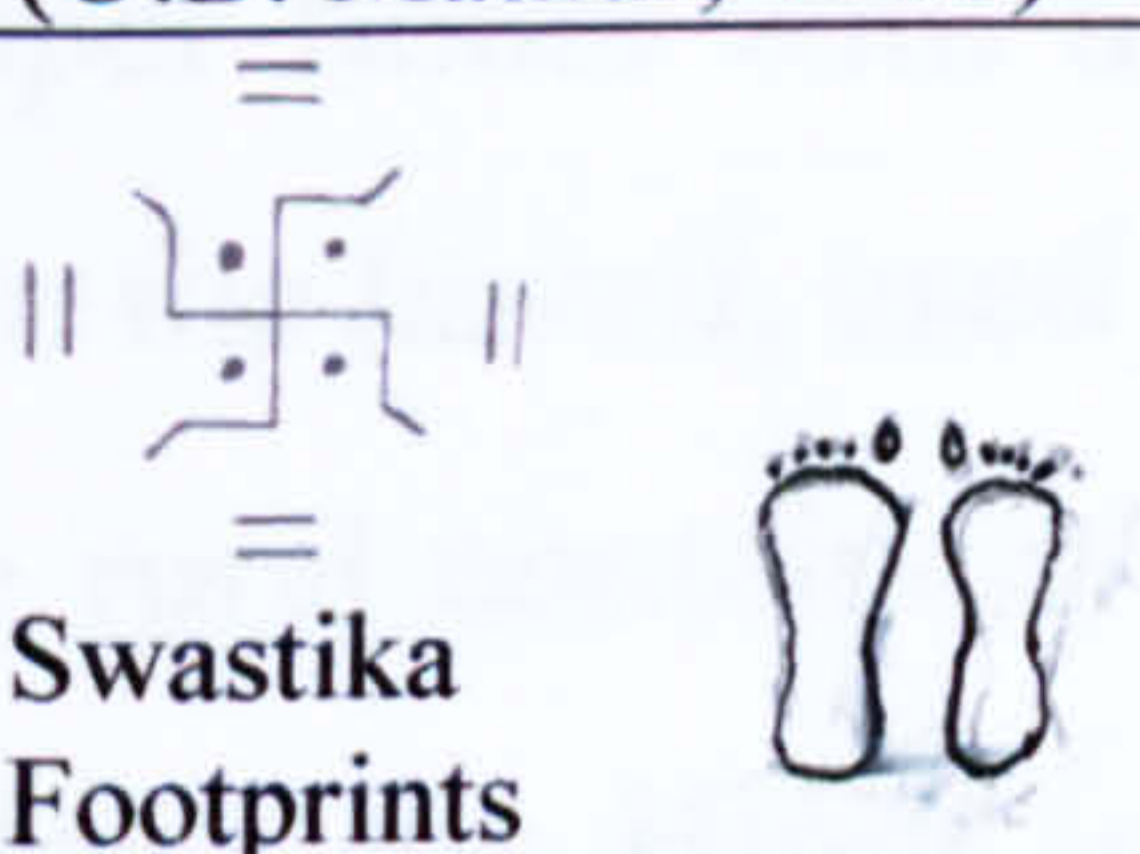

Marwari *haveli*, the niche is occupied by an image of Lord Ganesa. This particular element is absent in Muslim *havelis*, where the entrance door is usually decorated in a floral pattern. Nawab Sahib *ki haveli* at Jaipur was the only one that had the name engraved at the entrance. Another Muslim *haveli* in Tonk had floral engravings with the date of construction. Table 4.2 shows the various ritual demarcations observed at the entrances of *havelis*.

### Symbolic Significance of the Entrance

A great significance is associated with crossing of the threshold in a *haveli*. It is observed in the conscious integration of the *dehli* (stone or wooden piece at the entrance), which enforces the ritual of stepping over the threshold. The taboo on crossing of the threshold by strangers is mentioned in a number of local Rajasthani legends. A number of *vastu* implications, associated with the entrance door are also mentioned in the texts. The *kalash* during the ritual of *Vastu Shanti* is buried on right side of the entrance. *Vedha* or obstruction in front of the door is to be avoided. *Vedha* is also mentioned in the regional text *Rajvallabha* which says that any door or opening should be aligned by another door, opening or niche on the opposite walls. A plain door is inauspicious and most of the *haveli* entrances are decorated with auspicious symbols. Another interesting point is the scale of the actual opening in the *havelis* that is low in contrast with the average height of the tall Rajput and Marwari men. This is possibly to conform with the local custom of greeting called '*dhok*' that requires bowing down to pay respects. The indirect entrance or '*poli*' is also explained as an attempt to ward off evil spirits, as they cannot turn.



**Table 4.2- Ritual Demarcation in the Entrance of *Havelis***

FESTIVALS	RITUAL CEREMONIES	MANDANA PATTERNS
<i>RakshaBandhan</i> and <i>Teej</i>	<p>These two festivals fall in the month of July heralding the advent of monsoon and various <i>mandanas</i> relating to monsoon such as '<i>lehariya</i>' (wavy lines) are made on the floor.</p> <p>Adjoining picture shows the symbols made on the sides of the entrances during these festivals.</p>	 <p>(Jogendra Saxena, 1979)</p>
<i>Diwali</i>	<p>The most celebrated Hindu festival that marks the advent of the Hindu New year . The family members get together to worship <i>Lakshmi</i> – the goddess of wealth and various floor decorations are made to welcome her.</p> <p>Adjoining photograph shows the floor <i>mandanas</i> on the steps and main entrances of a house in Nathdwara.</p>	
<i>Griha Pravesh</i>	<p>A <i>bandanwaar</i> made of mango leaves is tied on top of the entrance on any auspicious occasion such as '<i>Griha Pravesh</i>' and marriage.</p> <p>Adjoining picture shows <i>bandanwar</i> in a house in Rajasthan.</p>	 <p>(U.B. Mathur, 1968)</p>
Birth of a Child	<p>Tiny footprints are made on each side of the door on birth of a child. If a boy is born, it is represented by making 'sun' and 'moon' on each side of the door. '<i>Swastika</i>' signs are also made</p>	 <p>Swastika Footprints</p>
Marriage Ceremony	<p>The entrance is decorated with paintings indicating celebrations and processions and a <i>bandanwar</i> is placed at the entrance. Doors of all rooms are decorated with religious motifs and sometimes a <i>bandanwar</i> is put on all doors. A <i>toran</i> (a wooden crown with birds) outside the door indicates that a girl in the family has got married. The groom touches the '<i>toran</i>' with his sword before entering the haveli on the wedding day. On bridecoming, in Muslims, the females in the groom's house stop the couple at the entrance and a chapter from the holy Quran is read.</p>	<p><i>Toran</i> in <i>Singhion Ki Haveli, Sirohi</i></p> 



## 4.3 Expansion of the Centre – Spaces in the *zenana* Court

### Etymological Roots

Etymologically, it is the terms *bari* and *bara* that are origins of the different spaces in the *haveli*. These terms mean an opening, either on the horizontal or vertical plane. It is often used for a door or window opening in Rajasthan. A verandah space, usually with three openings is called *tibari* (literally, ‘openings on three sides’) in local language. This is also called *dalaan* in some areas. (Refer Table 4.3 for sub regional variations in spatial terminology). A further development of the semi covered *tibari* into an enclosed large space with four walls is the *chaubara* ( meaning ‘four openings’); usually the biggest room in a *haveli*. *Tibaris* and *chaubaras* evolve around the court as shown in Figure 4.3. The spaces are basically defined according to the number of sides or the number of arches. Thus, a small space on one side in the Tatterkhana house is called *ikbara* (‘*ik*’ meaning ‘one’) as it has a single opening. A big room with a double row of 3 arches is called *chaichaubara* (‘*chai*’ meaning ‘six’).

*Chandni* (literally moonlight) was an enclosure on the upper floors with high walls and no roof. The corner rooms or other small rooms in the *haveli*, used for storage are called *Kotha*, a name probably taken from the rural containers for keeping grains *Kothi*. The prayer space is called *puja* from the Hindi term *pujiya* meaning ‘to be honoured’. The etymological derivations of other spaces are explained in the Table 4.3 at the end of this chapter.



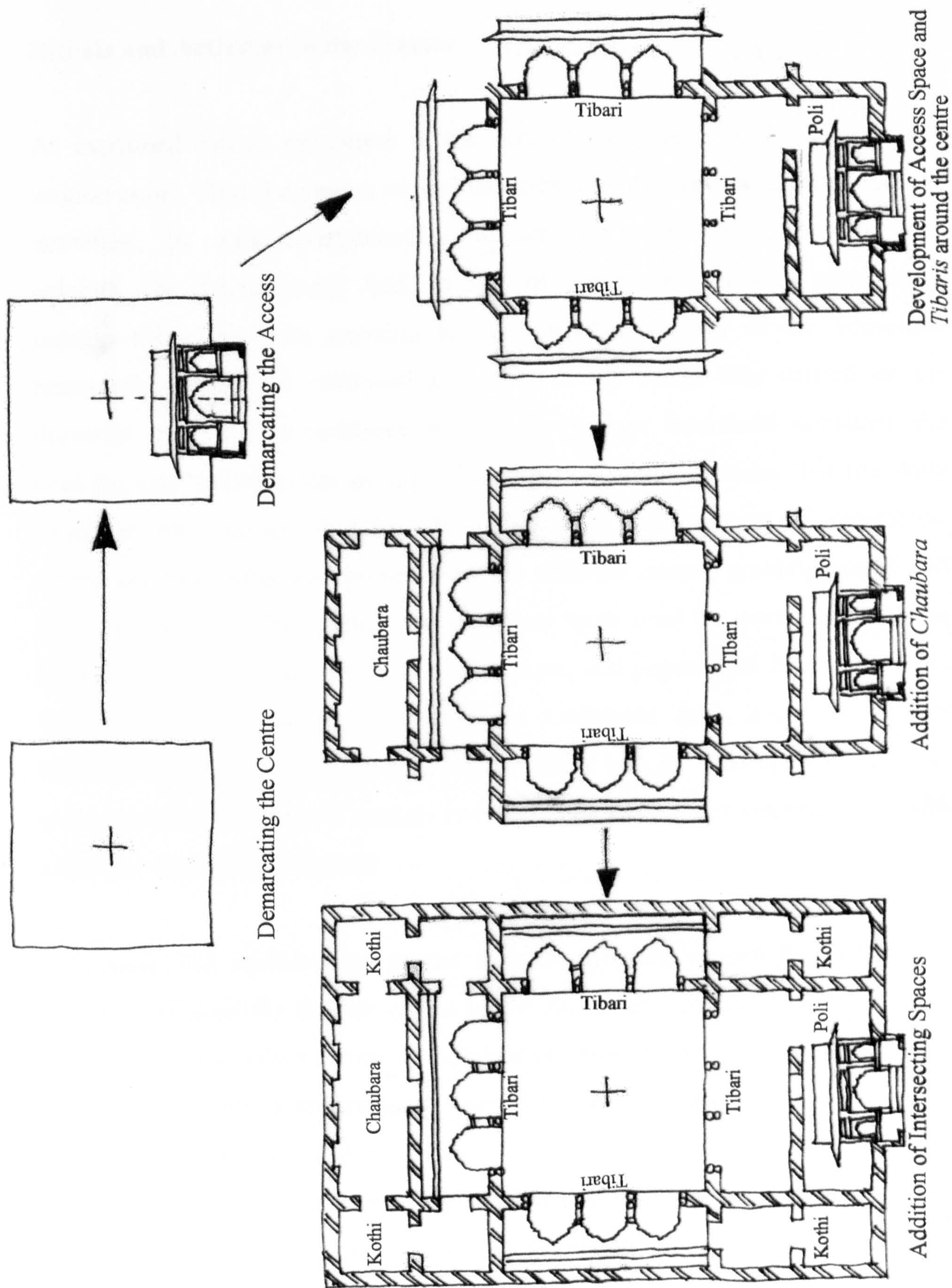


Figure 4.3 - Centric Evolution of *Haveli* Spaces

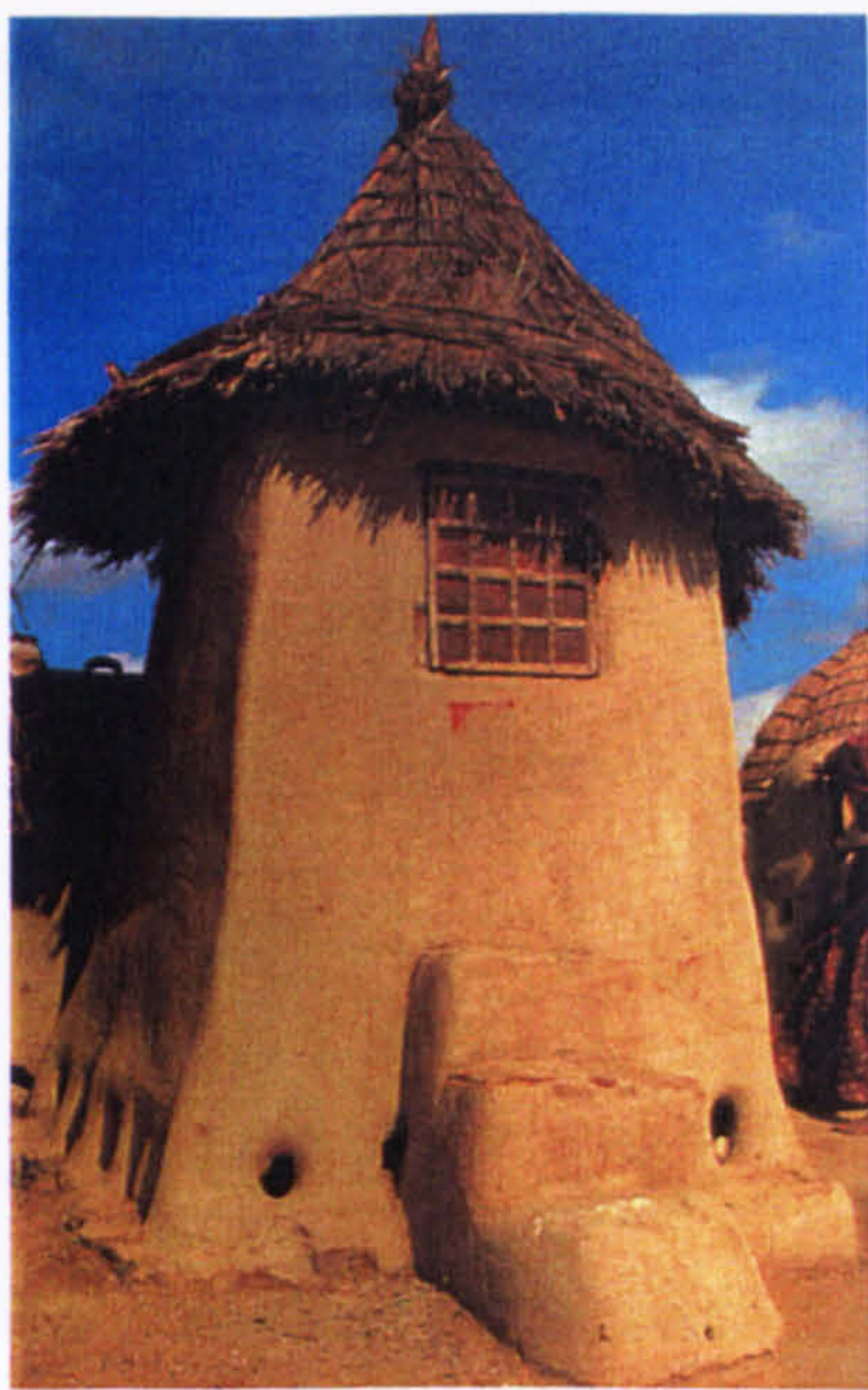


## Rituals and Activities in the *Zenana*

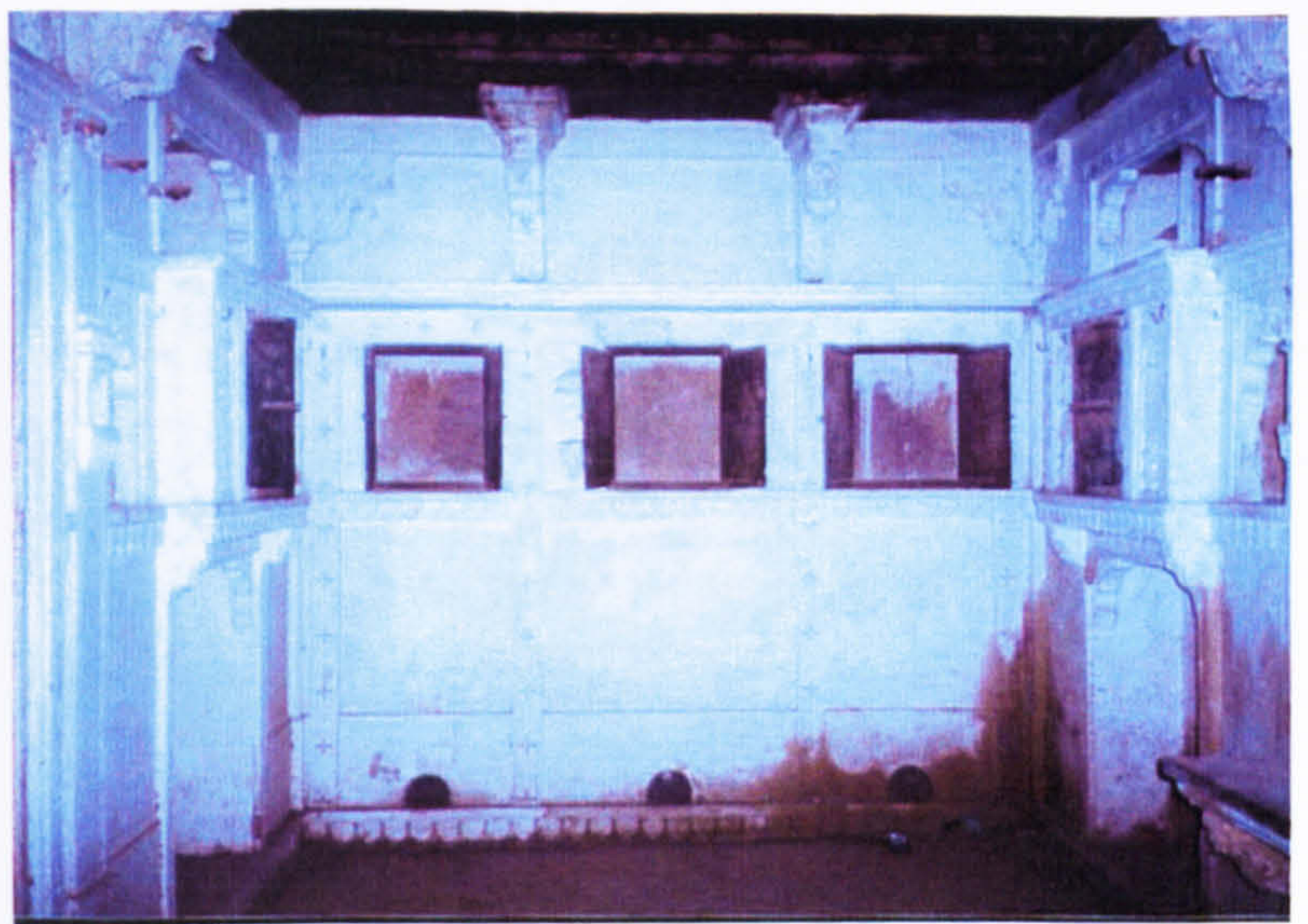
As explained earlier, the centre or the core of the *havelis* is always the inner *zenana* court. Thus the spaces around this centre evolve as a result of the female activities. In multi court *havelis*, with separate male courts, the men rarely entered the female court. And, in case of single court *havelis*, men stayed outside the court from morning to evening. The women of the household remained apart in the courtyard and inner rooms where they carried on the domestic chores. The courtyard is used for various household activities like cooking and washing and drying of clothes and grain. Besides this the daily rituals in the *zenana* court include the morning *puja*, cutting of vegetables, taking out rice, *ghee* and pulses from the different stores, grinding spices and cooking activities. The terrace spaces (*chat*) were used by women for various household activities like drying clothes, spices, and *papad* (flat flour cakes) etc. Variety in food was very significant in traditional India and as Professor Rehmaan from Tonk remembers – each *haveli* had its own special recipe of *sharbats* (cool drinks) and *mithais* (sweets). The inner court worked like a self-sufficient food processing unit.

In summer, the interior open spaces were used by the women for sleeping. In winter, they used the interior rooms or the *tibari* for sleeping. Married couples usually used one of the rooms in the night or *chandni* space. Terraces on the 1<sup>st</sup> and 2<sup>nd</sup> floor were multifunctional, used for sleeping and drying of clothes and spices etc. This was used for sleeping in summer nights. The staircase as a transition zone was often in the form of a dark narrow passage with small niches at the corner on a landing for keeping candles. Figure 4.4 – 4.7 show the various spaces in the inner *zenana* court.





A rural *Kotha* for storing grains (Ilay Cooper, 1998)



Storage for grains in the *tibara* of an inner court. The grains are poured from the upper windows. The hole below is blocked and opened to take the required amount when needed. Patwa Haveli, Jaisalmer



Looking into the *tibara* space. Suraj Haveli. Jaisalmer



*Tibari* space showing door leading to the inner ohra. Marwari Haveli, Sojat



Entry into the inner court, showing the *poli* space with a peeping hole in the centre to check the visitor's identity. Naron Ki Haveli, Nimbahera.



View from the *poli* space looking into the inner court, Naron Ki Haveli. Nimbahera

**Figure 4.4 - Spaces in the Zenana Court**

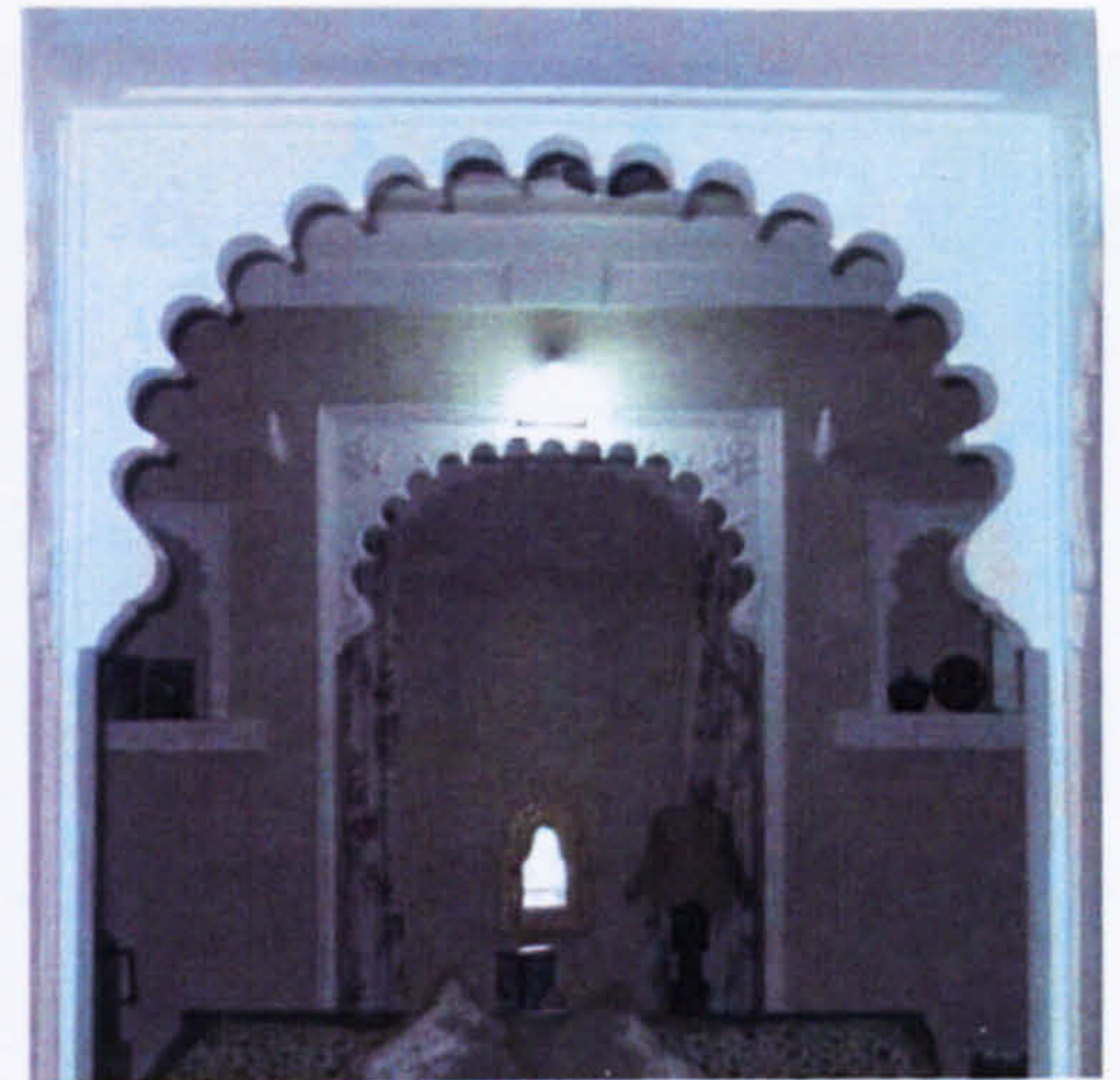




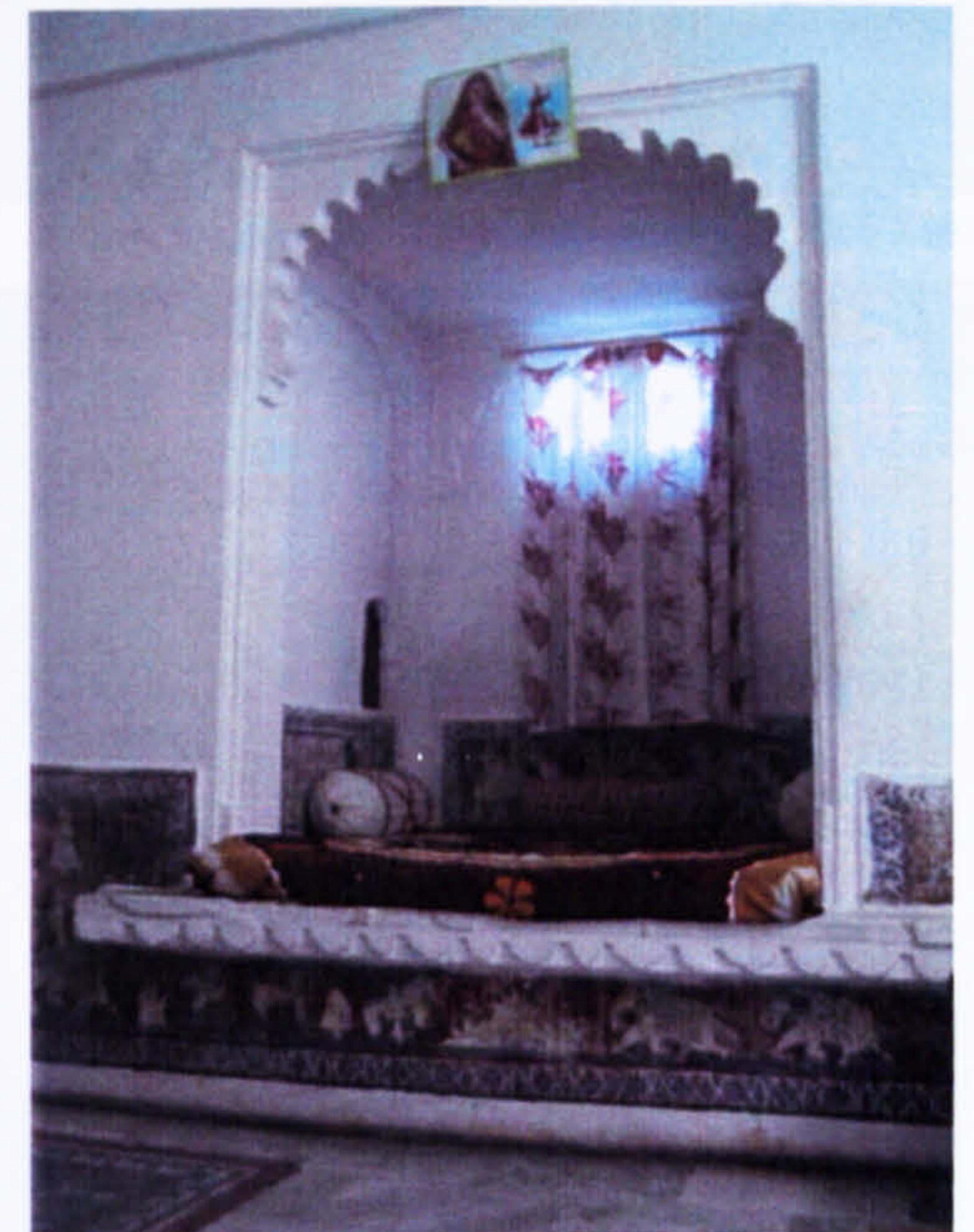
Room in Mammayon Ki Haveli, Udaipur



Medhi in Bhandari Haveli, Salumbher



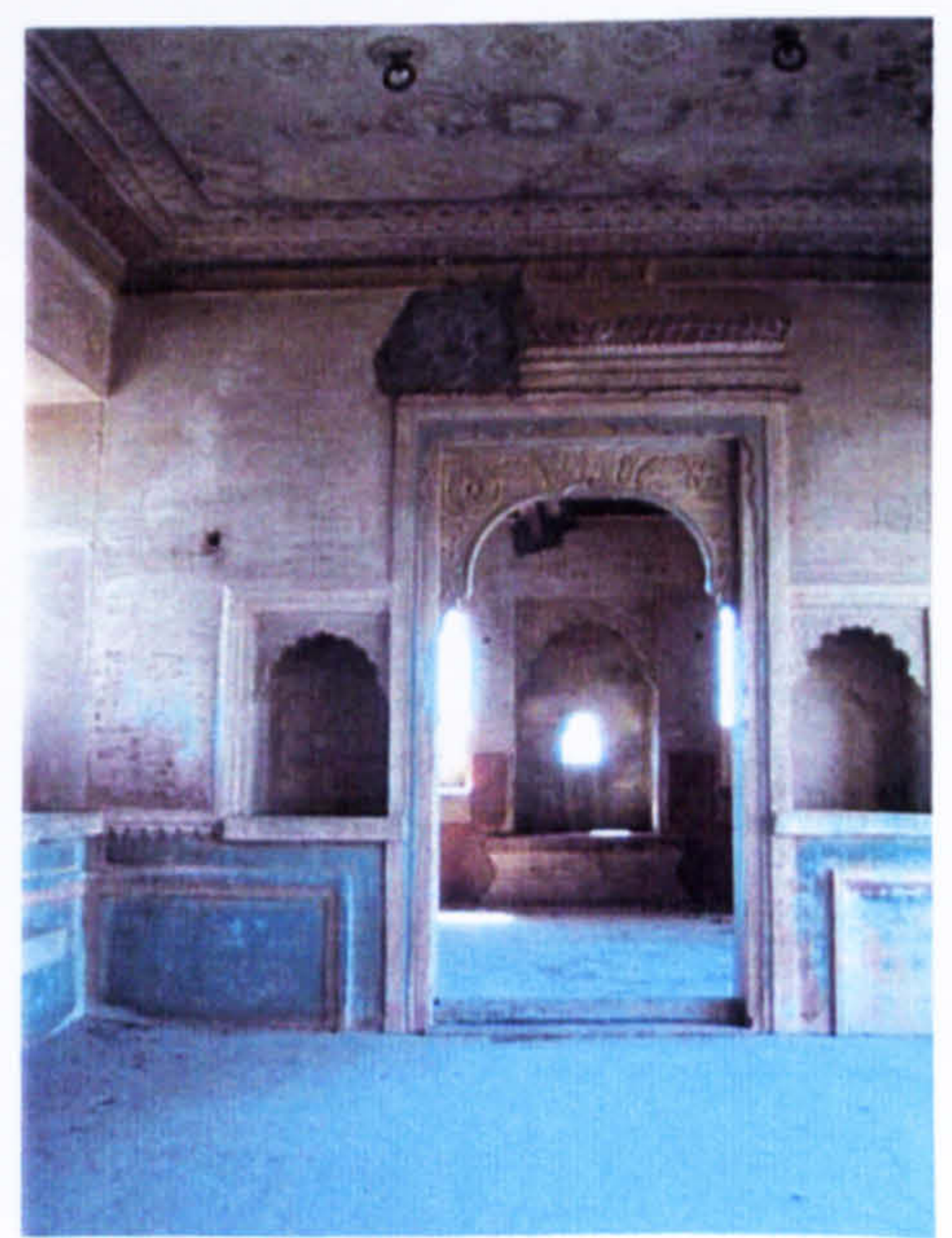
Upper Room, Bohera Haveli, Udaipur



A Gokhda for seating.  
Mammayon Haveli, Udaipur



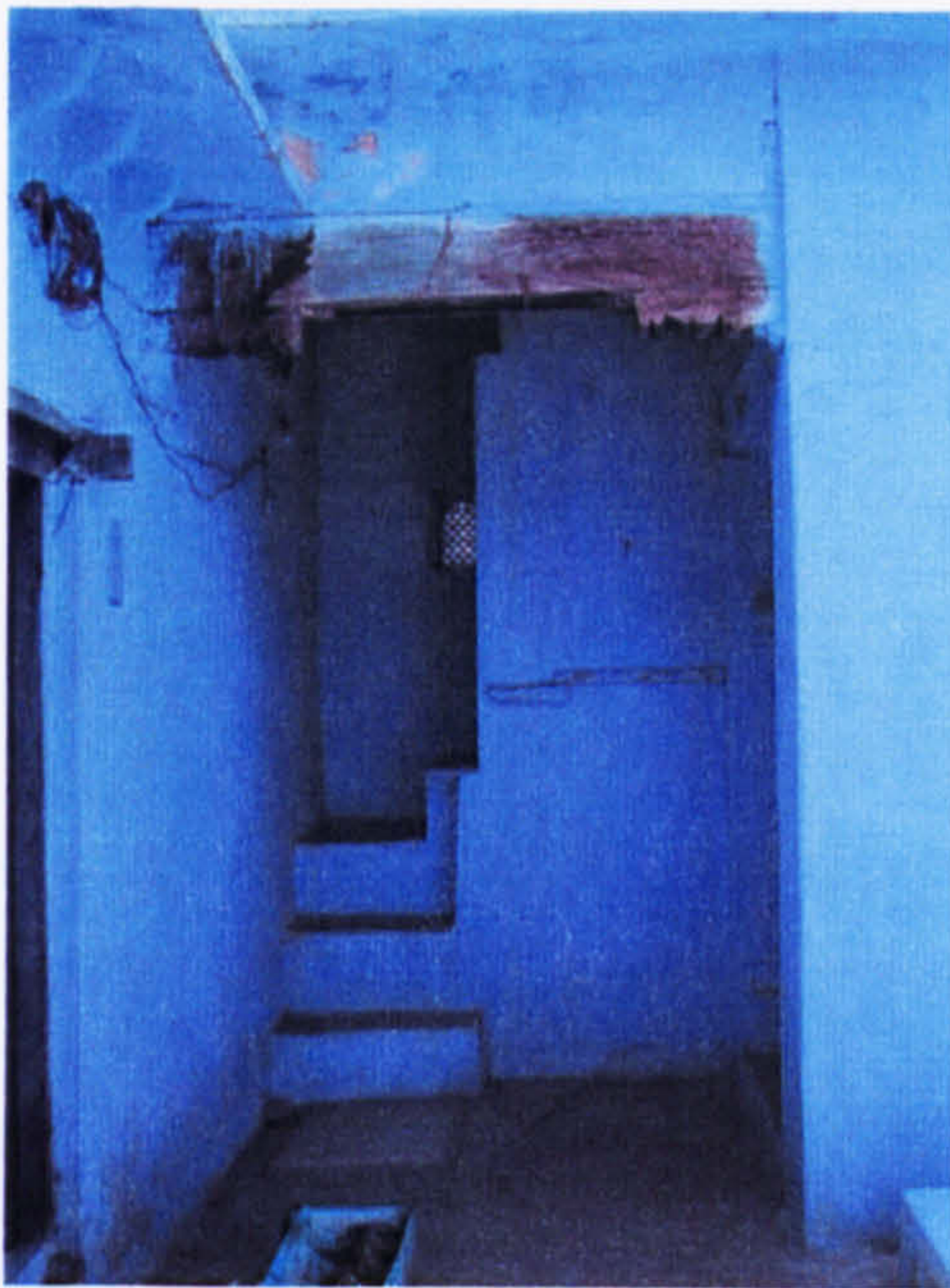
Sleeping cots hung on the wall. Singhion Haveli, Sirohi



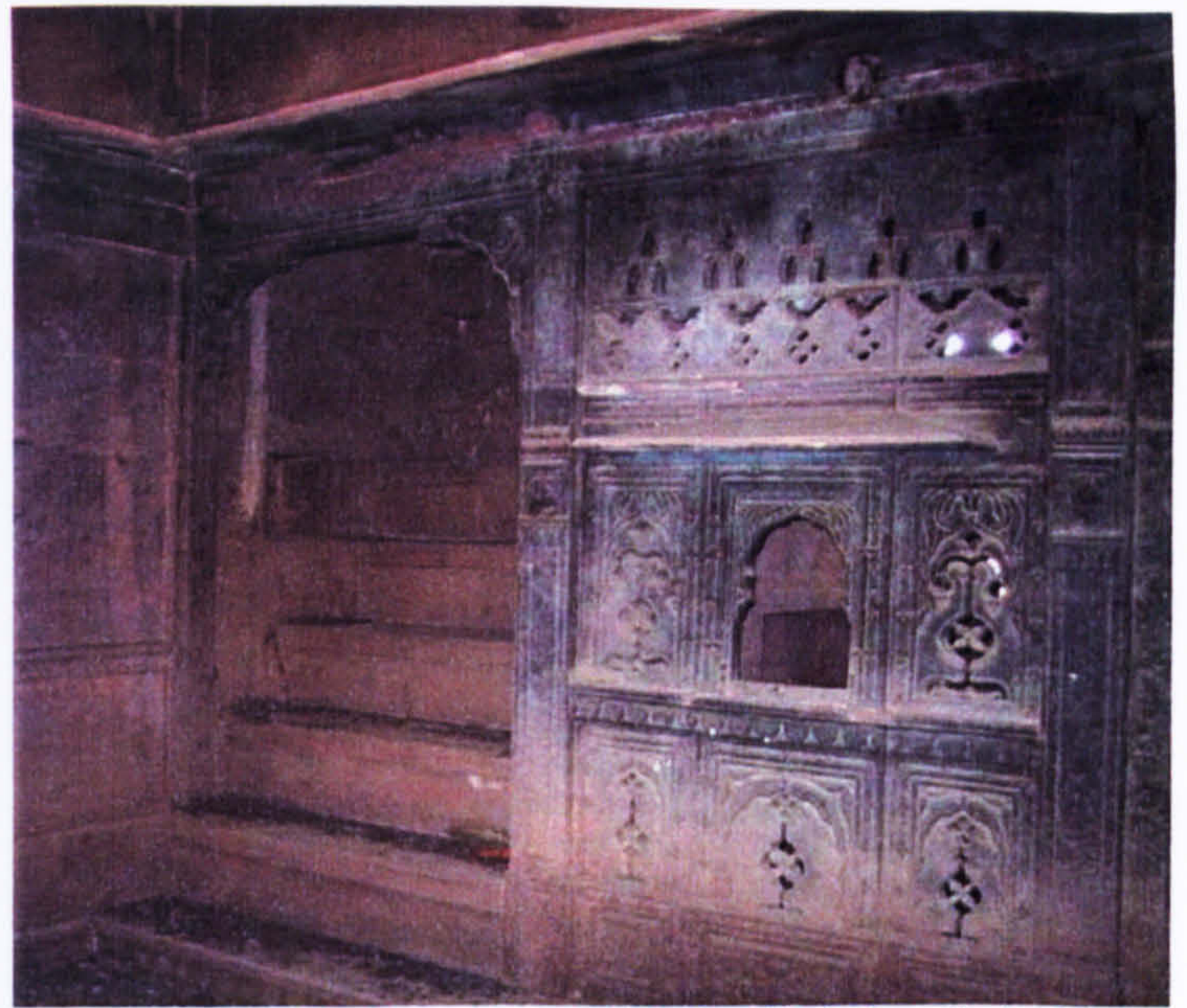
Secnod floor room,  
Naron Ki Haveli, Nimbahera

**Figure 4.5 - Spaces Inside the *Haveli***





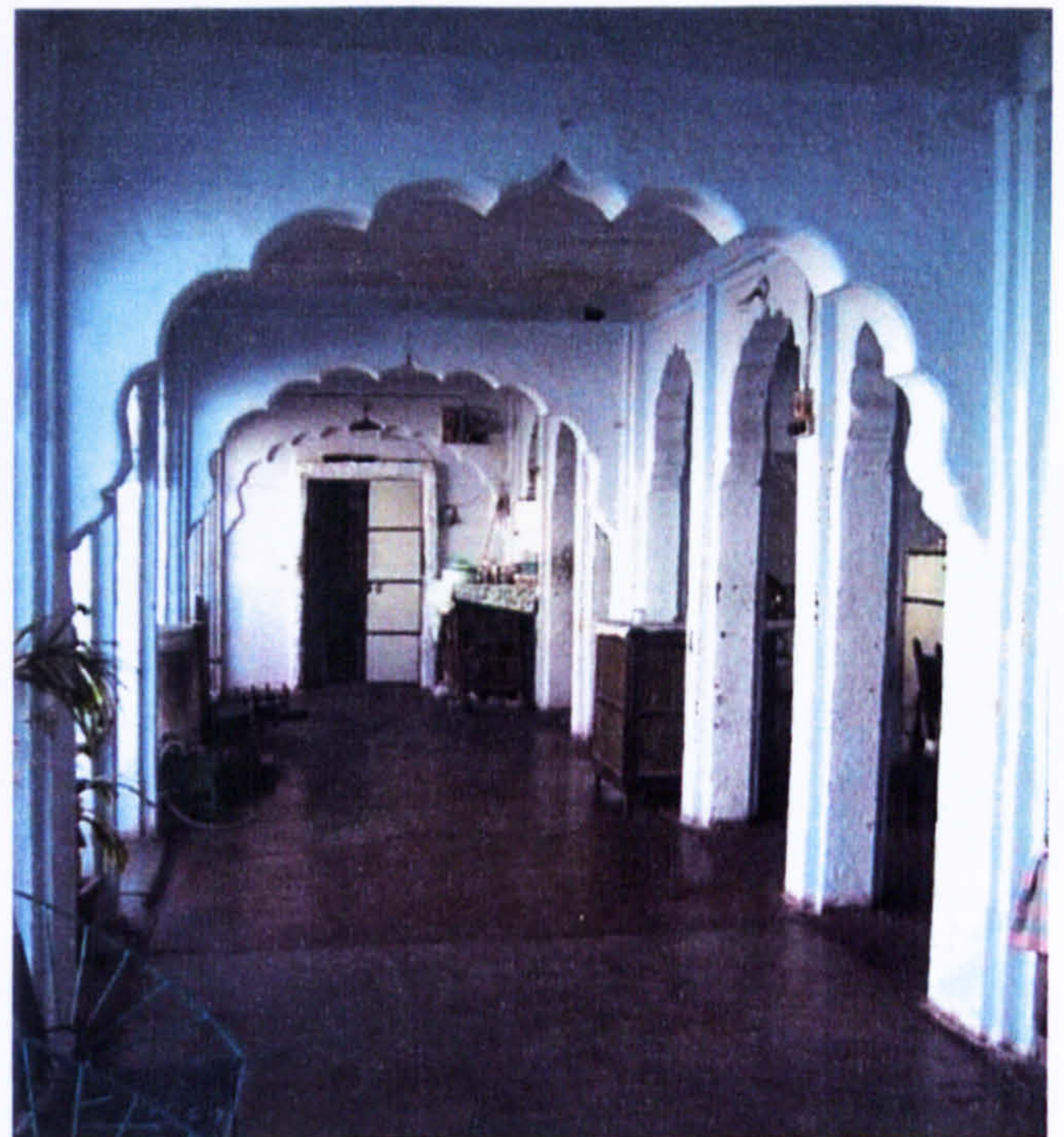
Singhion Ki Haveli, Sirohi



RoshanLal Haveli, Pokhran



Second Floor. Sharda Haveli, Nimbahera



Second floor, Bade Miya Haveli, Jodhpur



Chandni and adjoining space. Chaumoo Haveli, Amber



Terrace rooms, Jeevan Niwas, Udaipur

**Figure 4.6 - Staircases and Spaces on Upper Floors**





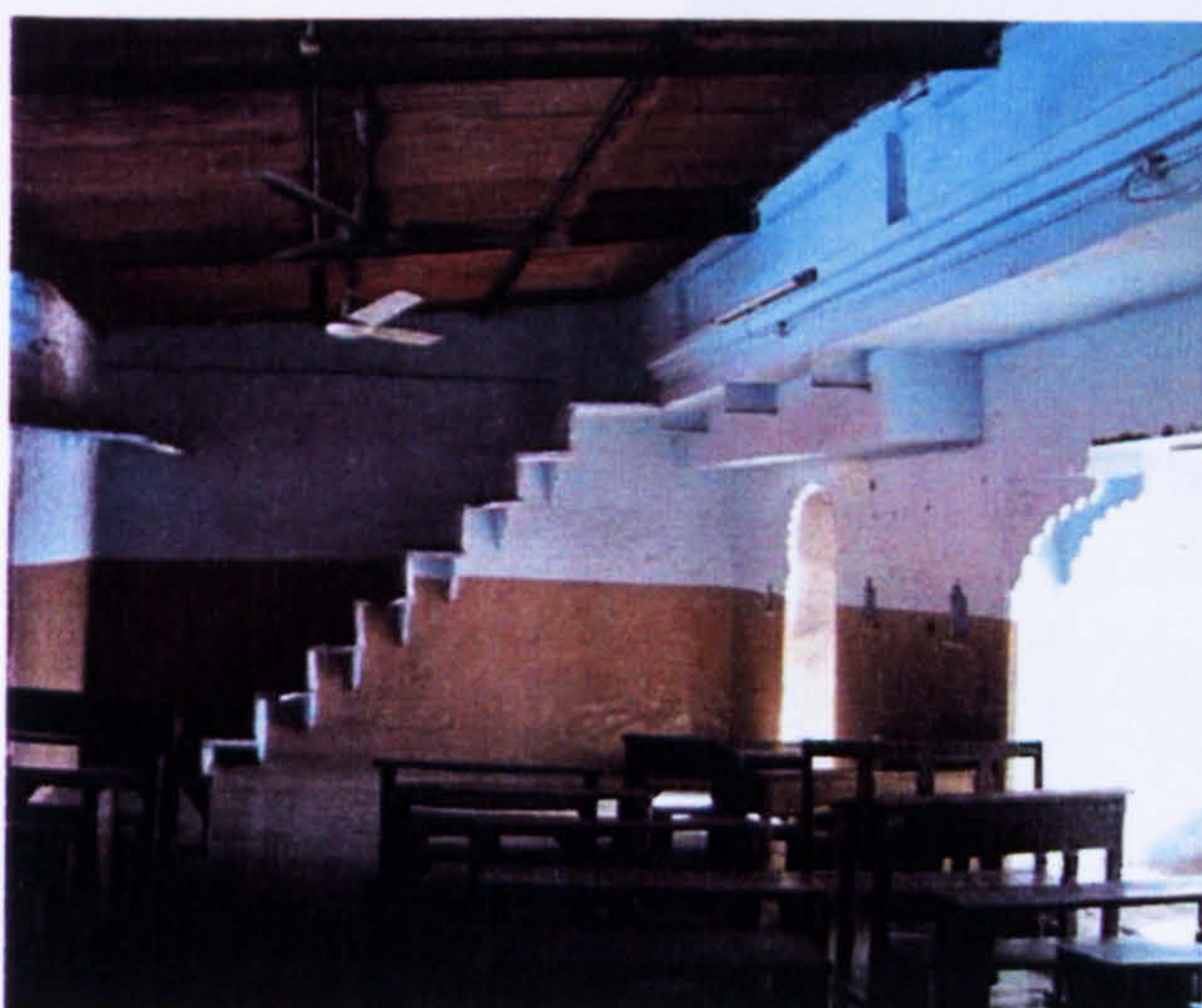
Terrace view. Mathur Haveli, Jodhpur



Terrace view. Haveli, Nathdwara



Terrace view. Naron Ki Haveli, Nimbahera



Terrace room. Kothari Haveli, Banswara



Upper terrace. Naron Ki Haveli, Nimbahera

Figure 4.7 - Terrace Spaces in the *Havelis*





Storage niches in a upper storey room of a Marwari Haveli, Sojat



Storage Niches, Singhion Haveli, Sirohi



Storage area below seating, Haveli, Mandawa

**Figure 4.8 - Inner Spaces for Storage and Staircases**



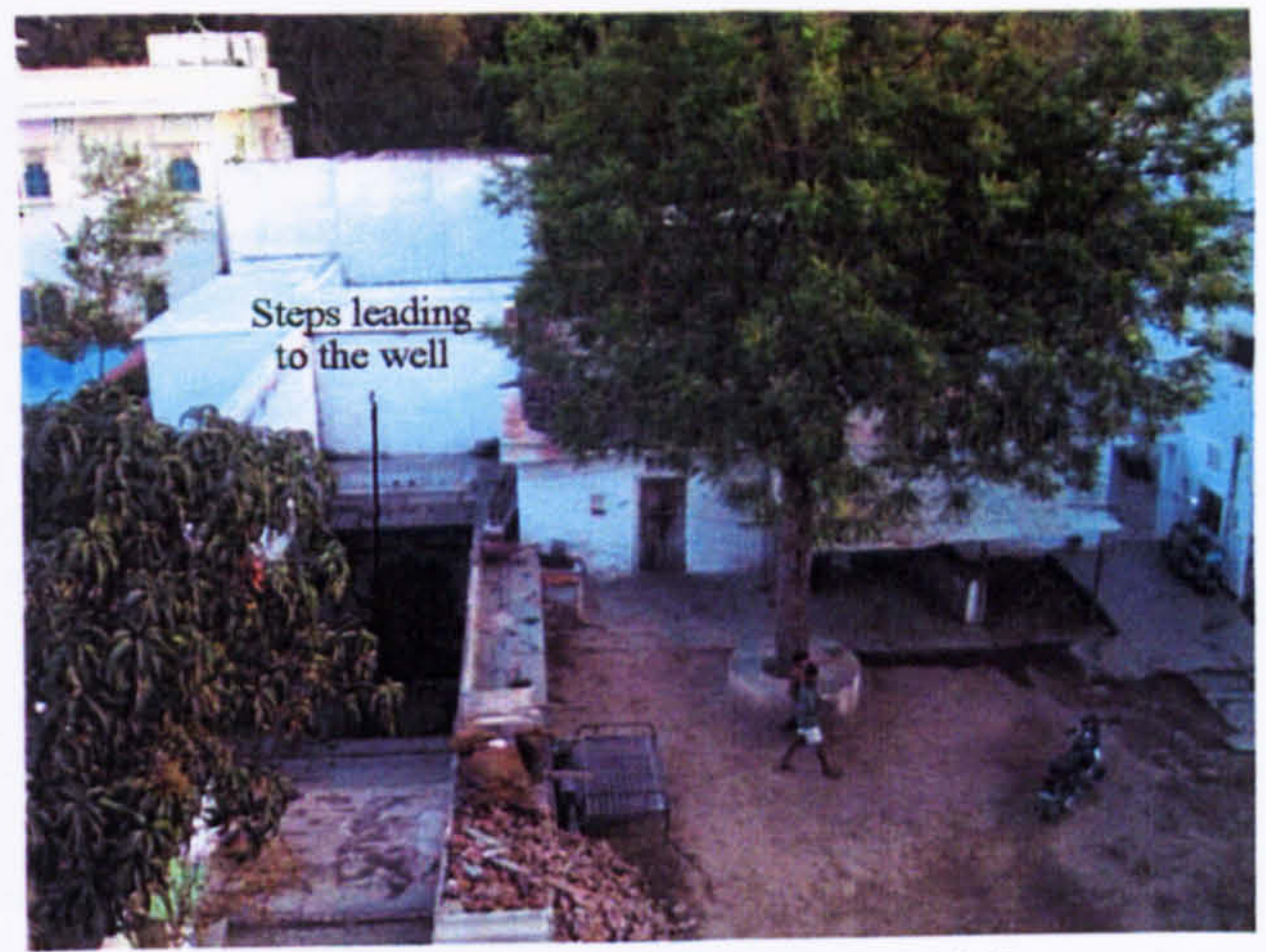
The interior rooms are mostly used for storing grains and family belongings (Figure 4.8). The Sharma family of Tatterkhana House in Jaipur had separate storage rooms or *kothas* for grains, flour, ghee (oil), weapons etc. Besides, the thick walls of the *haveli* and ground were used for storing valuables like cash and gold coins. The location was memorized by the owner and passed on verbally to the son. Most *havelis* have secret places to store the valuables like *talghar* or *bhanwara* (a basement room) often accessed by removing a stone panel in the flooring of ground floor room as seen in Saraf *Haveli*, Jhalrapatan. There are other secret spaces like a sliding stone slab of niche for storing valuables. Tatterkhana family in Jaipur talks about separate rooms for storing grains and food materials like *gheewala kamra* (oil room), *choon ka tibara* (flour store) etc. In Marwar region the back room was divided into two or three rooms called *ohra* or *ovaro* which were used for storage. Several innovative niches were worked out for storing grains etc. as shown in Figure 4.4.

Besides, the above spaces three other significant spaces for the daily rituals in the *zenana* were, the water space, *puja* or meditation space and kitchen space. The water space was an important reference point and its significance is indicated in all rituals. Figure 4.9 show the various water spaces in the *havelis*. The well was recognized as a source of life and was the first structure to be constructed in any dwelling unit. *Parinda* was the space for keeping water, usually a small room on one side of the inner court or just a well-defined niche in the court. In Bhatt and Kasliwal (Brhmin) *havelis* in Jaipur, *Parinda* is formed as a small enclosure near the staircase landing, probably because the kitchen in Brahmin *havelis* is often on the upper floors. This space was always marked by *mandanas* during festivals. It was ritually cleaned on occasions of birth and death.

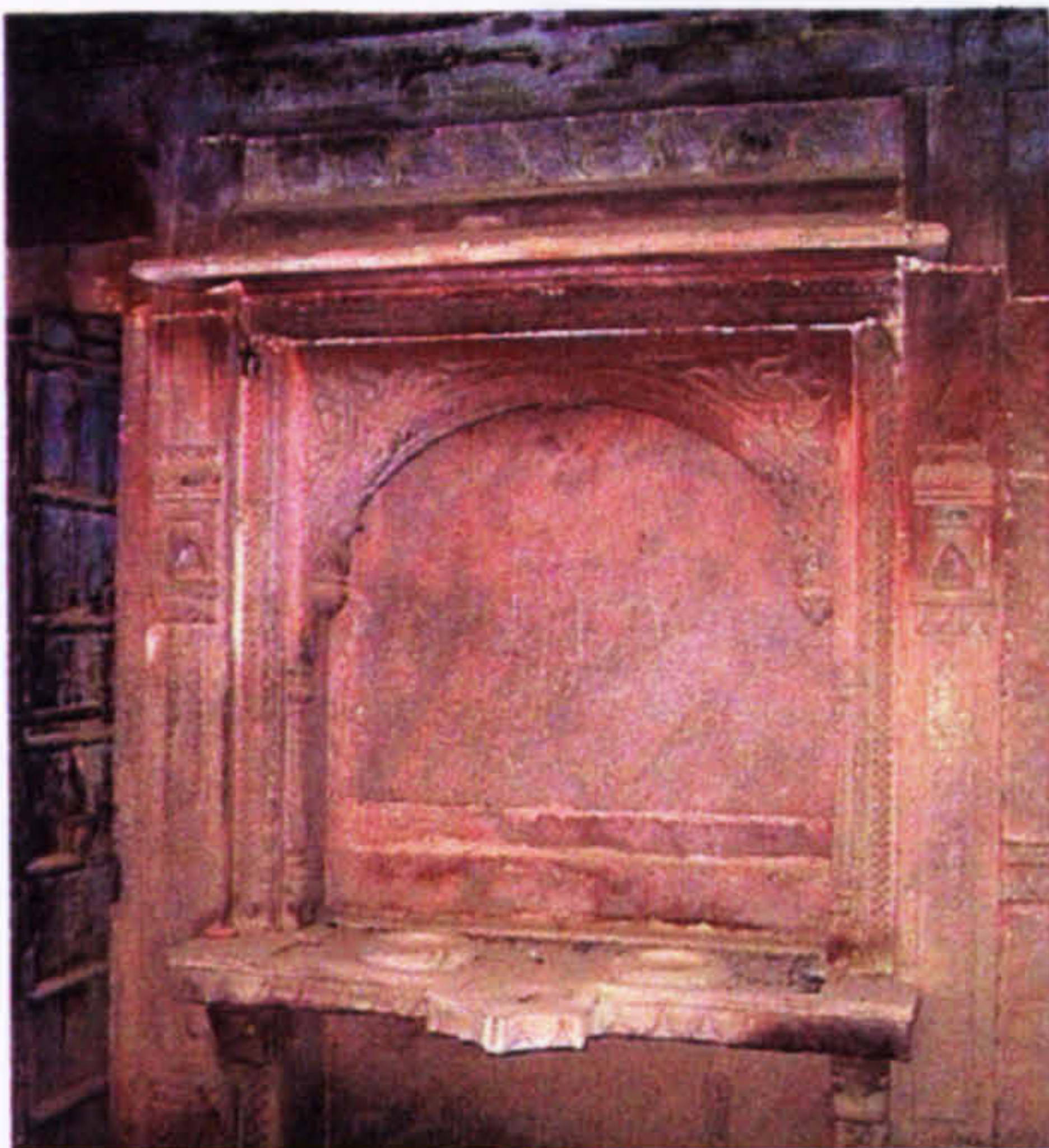




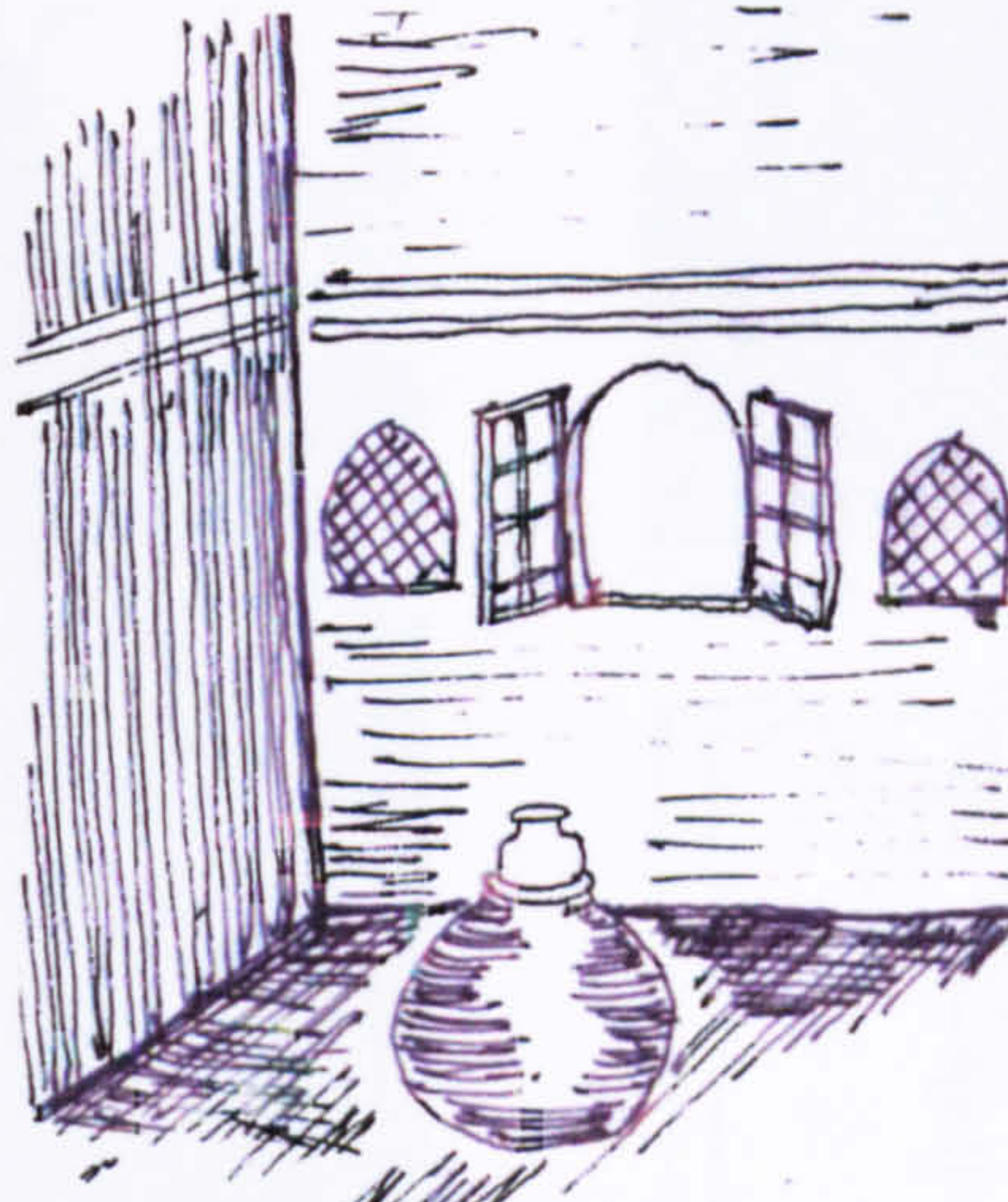
Well in Modi Haveli, Sirohi



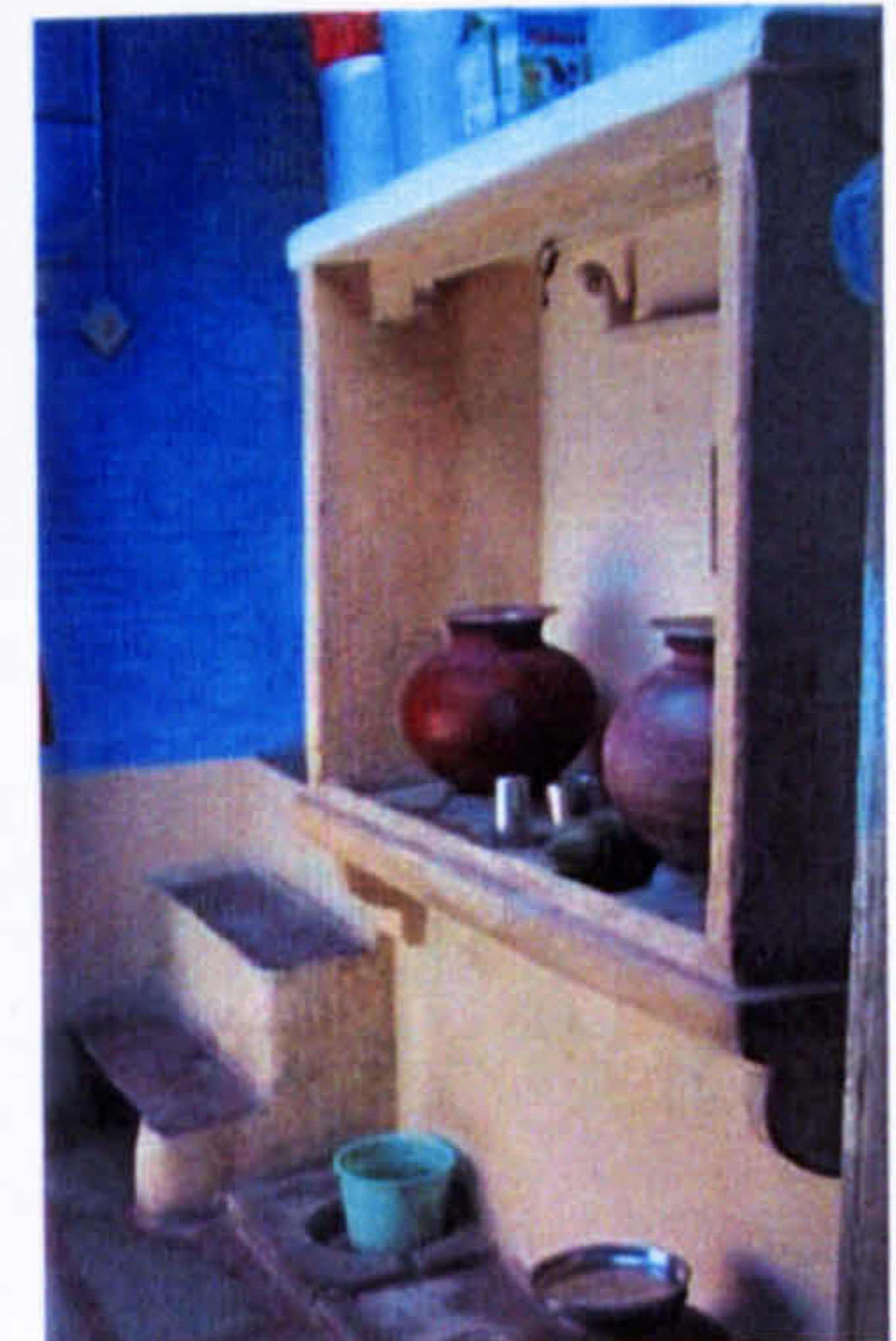
Baori (Stepwell) in Bohera Haveli, Udaipur



Niche for water pots,  
Roshanlal Haveli, Pokhran



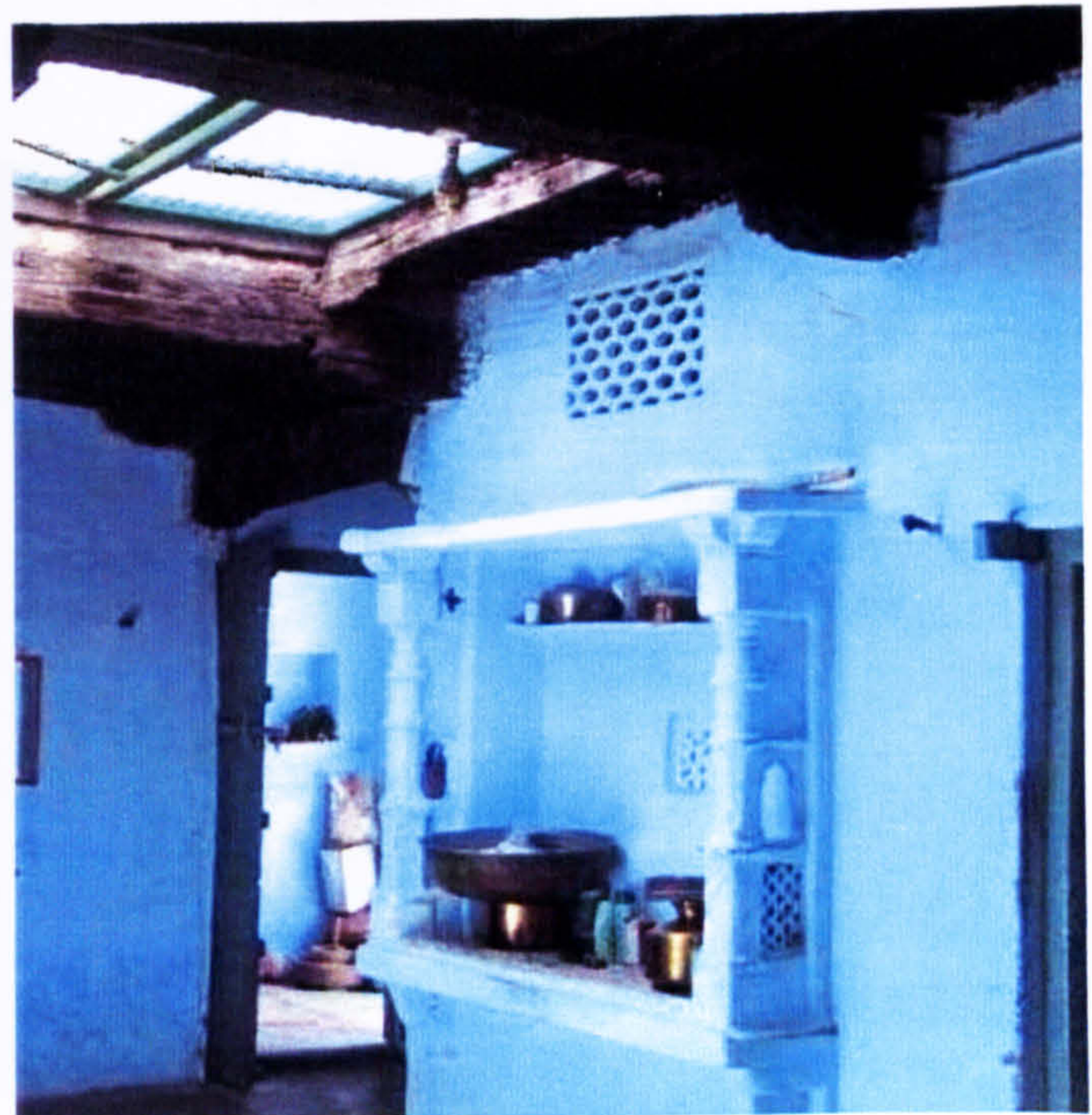
Parinda above stairs,  
Bhatt Haveli, Jaipur



Parinda (water space),  
Singhion Ki Haveli, Sirohi



Parinda (Water Space), Mathur Haveli, Jodhpur



Parinda in Goram Haveli, Sirohi

**Figure 4.9 - Parinda and Water Spaces in Havelis**

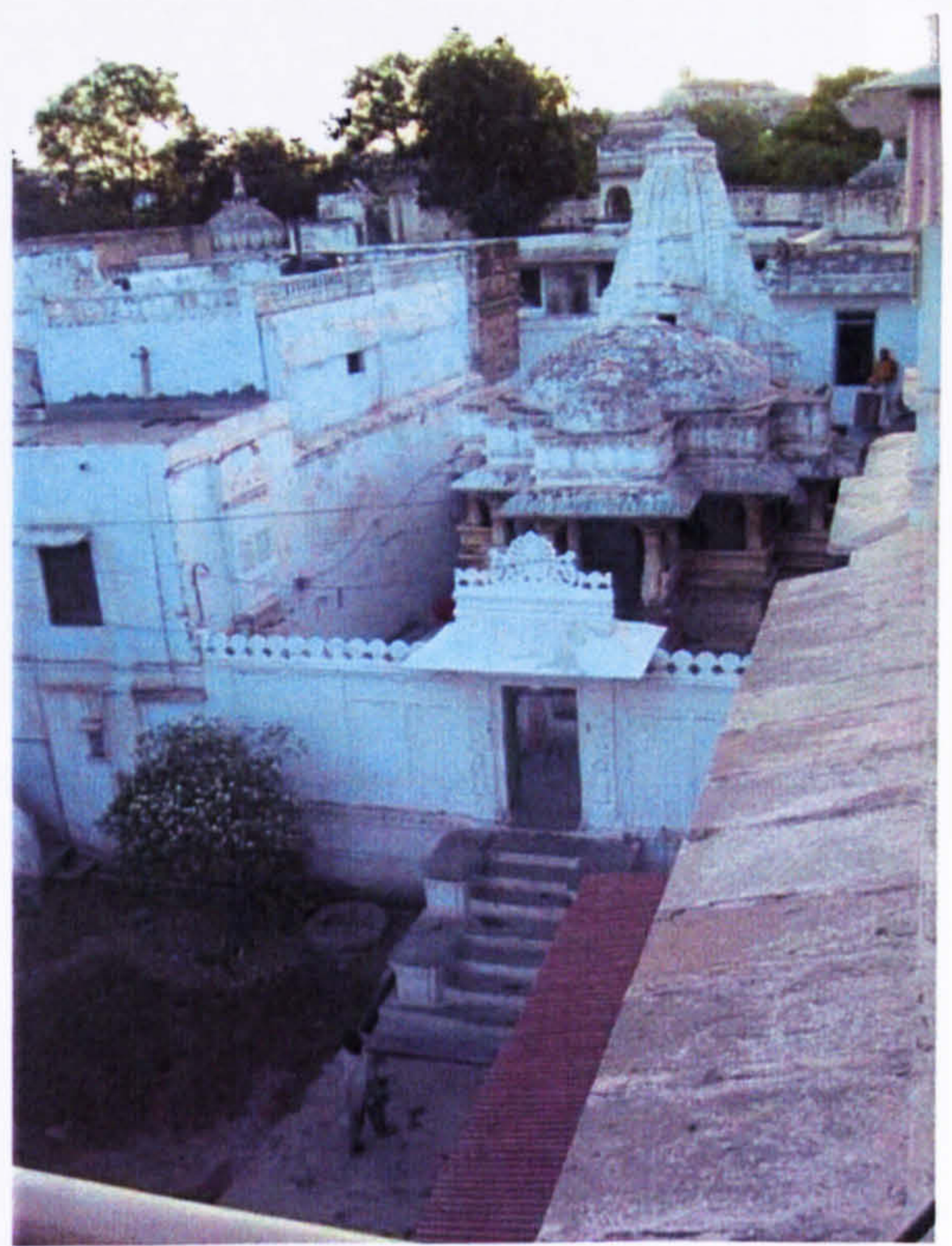




Temple in forecourt . Bhawani Singh Haveli, Bundi



Ishtdevi temple in Pal Thakur Haveli, Jodhpur



Temple in Bohera Haveli, Udaipur



Puja Room, Tatterkhana House, Jaipur



Puja Space in Amet Haveli, Udaipur



Agarwal Haveli, Tijara



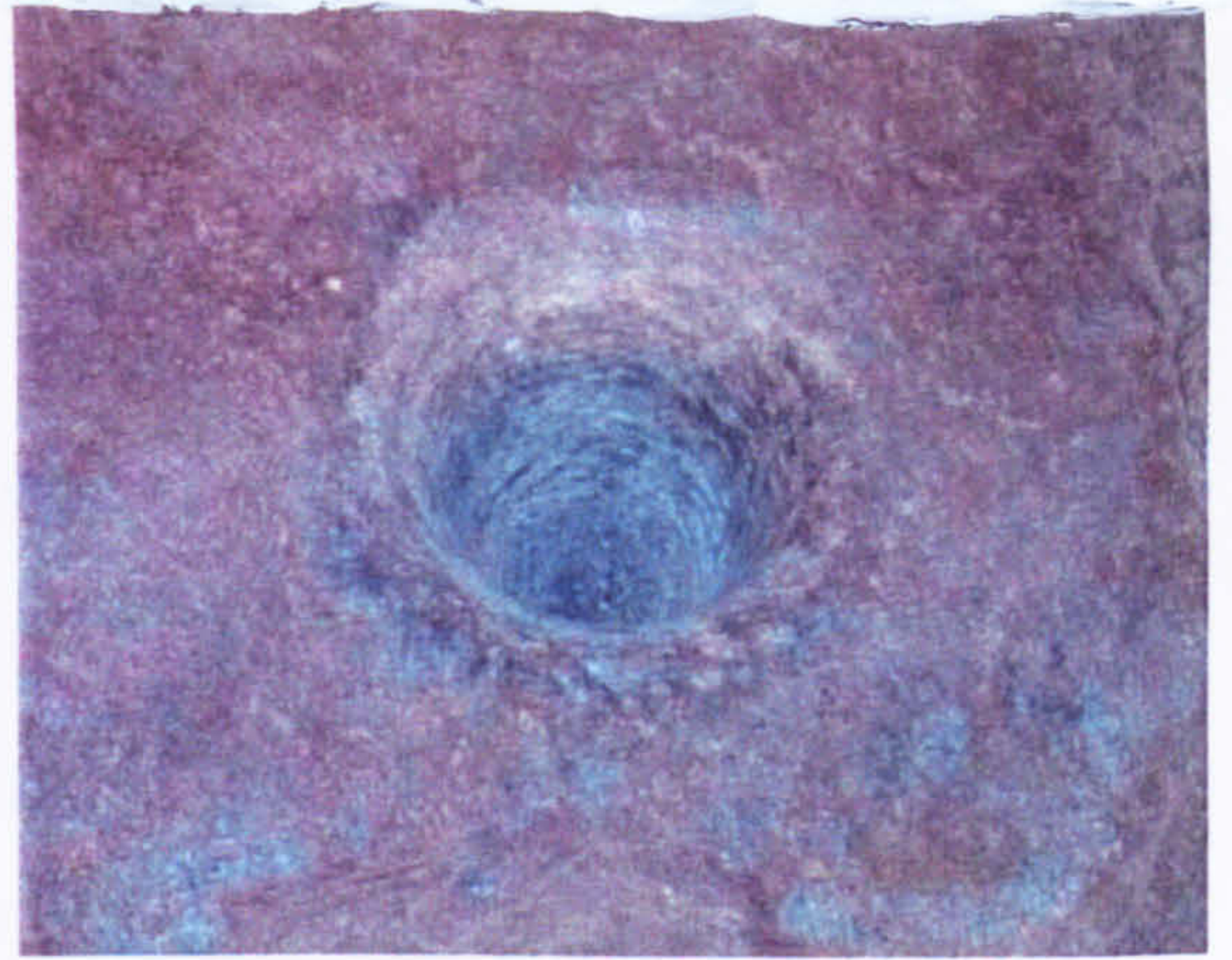
Rajput Haveli, Sirohi  
Puja Spaces in a Courtyard niche

**Figure 4.10 - Prayer (*Puja*) Spaces in *Havelis***

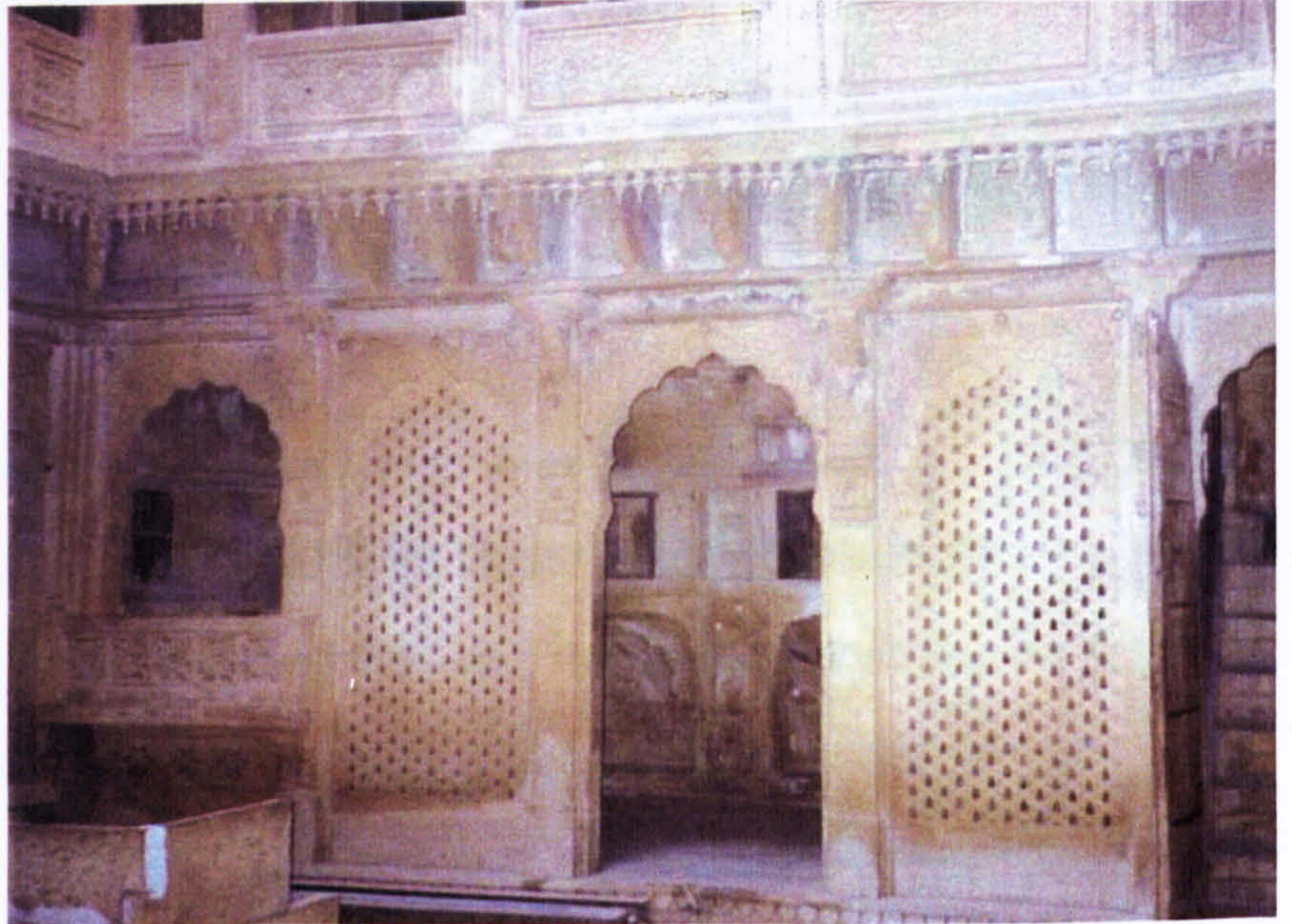




Kitchen stove on upper floor,  
Maanmal Sarf Haveli, Jhalrapatan



Hole in the flooring in *Tibari* space, for  
grinding spices. Bhandari Haveli, Salumbher



Screened kitchen on one side of the courtyard with storage niches inside,  
Patwa Haveli, Jaisalmer



Stone *chakki* (tool for grinding flour) and *silbatta* (for  
grinding spices) in a spillout of the Kitchen area,  
Purohit Haveli, Udaipur



Kitchen with stone jali and door from the courtyard,  
Roshanlal Haveli, Pokhran

**Figure 4.11 - Cooking Spaces in *Havelis***



In an interview with a *haveli* resident, it was found that they join hands in front of the *parinda* before commencing any work or before leaving the house. *Parinda* was cleaned and the earthen pots of water changed on festivals like *Diwali* or after birth of a child. In case of a well located in the *haveli* complex, similar rituals were performed around the well. There was a high reverence for the water sources in the community, which was also maintained inside the *haveli*. A number of *havelis* like Bohera *Haveli*, Udaipur, Bagor *Haveli*, Udaipur, Bapna *Haveli*, Jhalrapatan, Bohra *Haveli*, Jhalawar, Bhatt *Haveli*, Amber etc, had a well within the *haveli* complex.

In most *havelis*, the prayer space or *puja* was located in one of the small corner or side rooms. In some cases, the *Tulsi* plant in the court also served as a prayer space. Some examples of *puja* spaces in the *havelis* are shown in Figure 4.10. In case of Tatterkhana house, the father of Rishikesh Sharma follows the daily prayer rituals of the *haveli* till today. The *Puja* room is on the second floor. It involves creating a small *shivlinga* of yellow earth before commencing the prayers. After the daily prayers, the *linga* is put in a box. And, whenever the family visits the hometown Malpura, the collected *lingas* are immersed in the local water body, which is supposed to join the holy river Ganges, at a later stage. They worship the *kul-devi*, 'Dehari Mata' during *navratras* and on birthdays. Space for ancestral deities in a niche in the courtyards is often observed in the *havelis* of Shekhawati region locally called *pitar ji ka modh*. According to Professor Rehman (one of the *haveli* residents from Tonk) the Muslim *havelis*, did not have a specific prayer space as they would just put a piece of cloth anywhere and kneel on it to read the *namaz*. However, the Nawab Sahab *ki Haveli* in Jaipur and Mahmud Khan *Haveli*, Tonk had *masjids* in the complex. In a rare case like Bohera *Haveli*, Udaipur there would be a big



temple within the *haveli* complex. In Bade Devta *Haveli*, Thakurji's temple was in the ground floor next to the kitchen. The *puja* and *parinda* were significant spaces as they were periodically marked in every ritual of the family.

Another significant space in the *zenana* section was the kitchen (Figure 3.6). The Marwaris (Hindu traders) had kitchen or *rasoda* on one side of the court with the *chulha* (hearth) in the court. In Brahmin *havelis* the kitchen was always found on the upper floors. Kitchen in Paliwal *haveli*, Udaipur is a typical example of the kitchen in a Brahmin *haveli*, located on the top floor to allow the smoke to pass through the clay tiles in the sloping timber roof. In traditional *havelis*, the hearth or *chulha* (stove) was often located in the *chowk* along with a small square platform that constituted the kitchen area, generally termed as *chulha-chowka*. Later on, the kitchen space moved inside; but a big *chulha* was often located in the court, and during festivals major cooking was done in the courtyard space. The festive rituals also involved collective feasting, which took place in the court. At times of festival gathering, usually a *Qanat* or *Shamiana* (fabric tent) was used to cover the court for the function. A number of *haveli* courts have built in hooks on the first floor parapet for fixing the tent. The hearth or '*chulha*' was also marked on festivals like *Diwali* as shown in Table 4.1.

#### **4.4 Extension of the Centre – Public Spaces in the *mardana***

##### **Etymological Roots**

The rural origin of the *baithak* space goes back to a triple arched detached *tibari* located at some distance from the house for male gatherings. In *havelis*, the

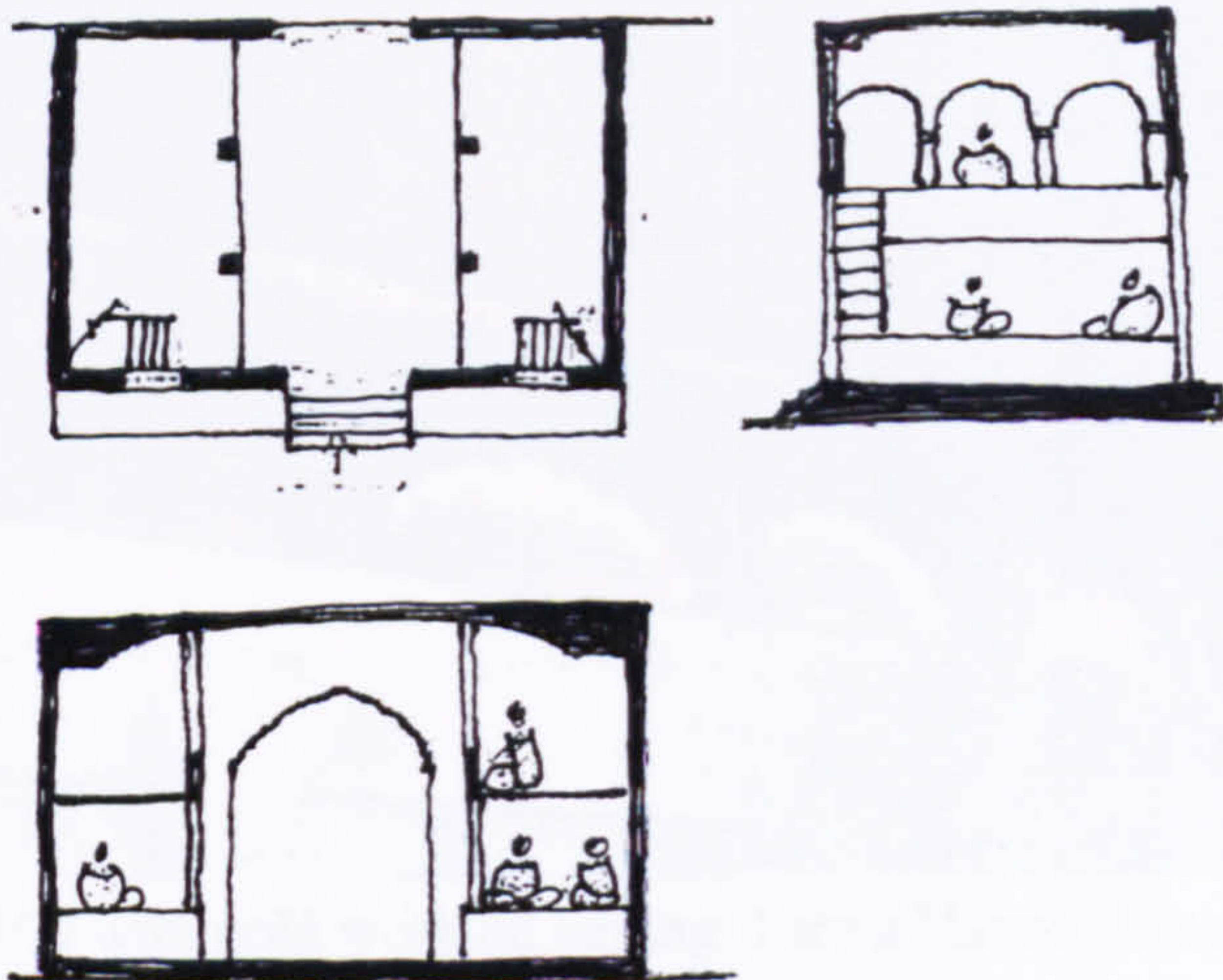


*tibari* in the outer court was used as a sitting space by the male members of the *haveli* and was called *baithak* (literally place to sit). Such a room with a vaulted ceiling was called *sal*, probably from the Sanskrit term *shala* used for one wing of the house. A large hall with columns was called *mahal* (literally ‘palace’) or *Mol*, usually located on the first floor overlooking the street. Similarly *khana*, a Mughal term for a section or department was used to name different rooms in the male section such as *naubatkhana* (room with trumpets at the entrance), *toshkhana* (treasury), *tehkhana* (basement), *asalkhana* (store for weapons), *diwankhana* (for receiving visitors) etc.

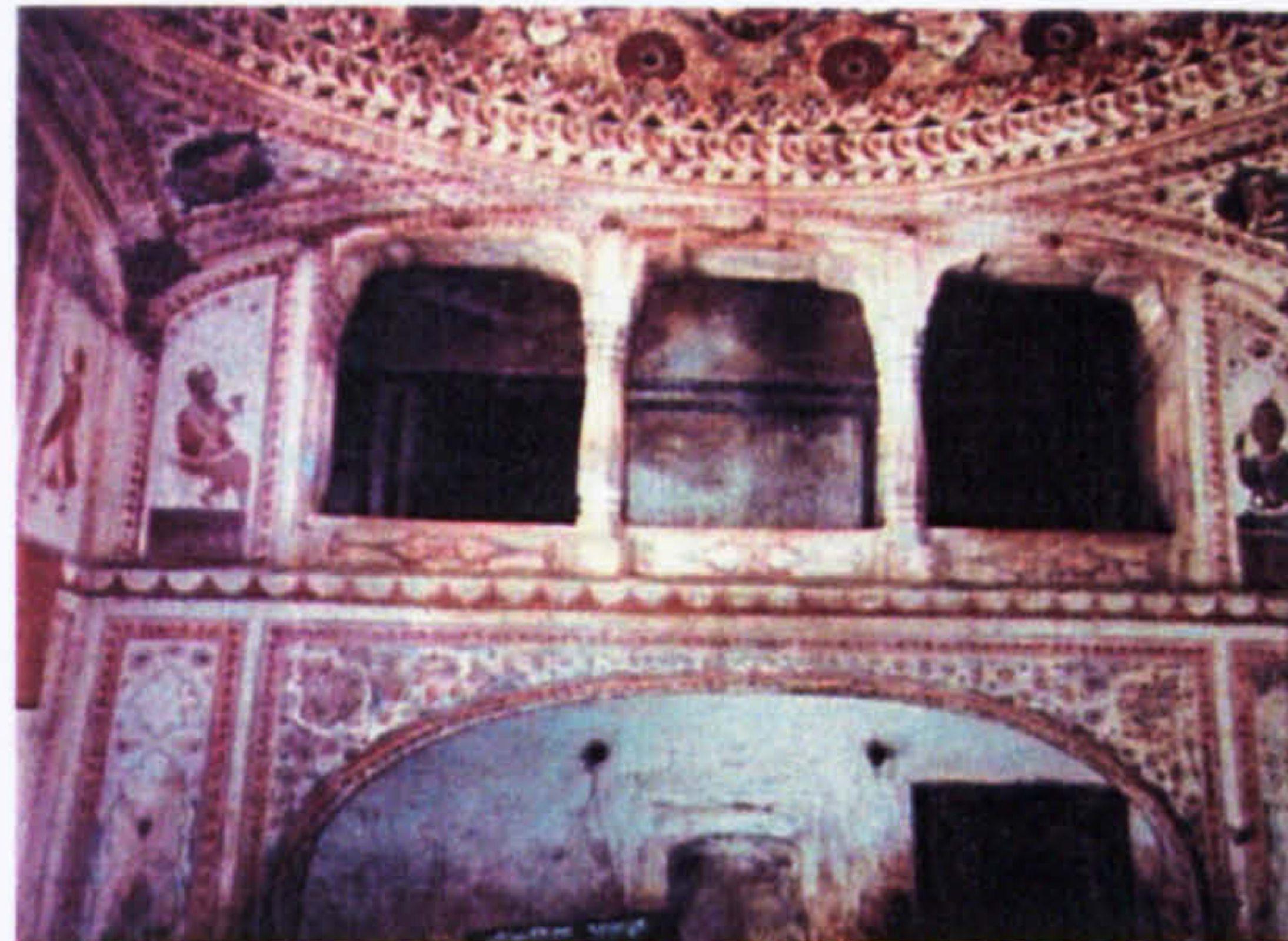
### **Rituals and Activities in the *Mardana* (Figure 4.12 and 4.13)**

The men had more interaction with the public realm and the important obligation of hospitality gave rise to the necessity of spaces to receive guests. Men spent most of their time outside the house or in the *baithak* and come into the courtyard only for specific purposes such as taking meals, or to sleep at nighttime. These spaces in the outer section of *haveli* included the *baithak*, the room where males relax, sleep and receive guests. The *baithak* may be a regular room or a *tibari* space. Women were not allowed in this section. The *baithak* also functioned as the status symbol of the household and the wealthier preferred to have a detached *baithak*. In Shekhawati *havelis*, the *baithaks* are located on the ground floor with an overlooking balcony. *Baithaks* were also used for official purposes, for example a *darbar* in a *thakur's haveli* or an accounts office in a Marwari *haveli*. In case of a *hakim* (doctor) as in Tonk *haveli*, the distillery was part of the *haveli* complex and the *hakim* used to provide consultancy in the *baithak* of his forecourt. The *mahal* or *mol* was the most ornate space in the *haveli*, used for receiving special guests.





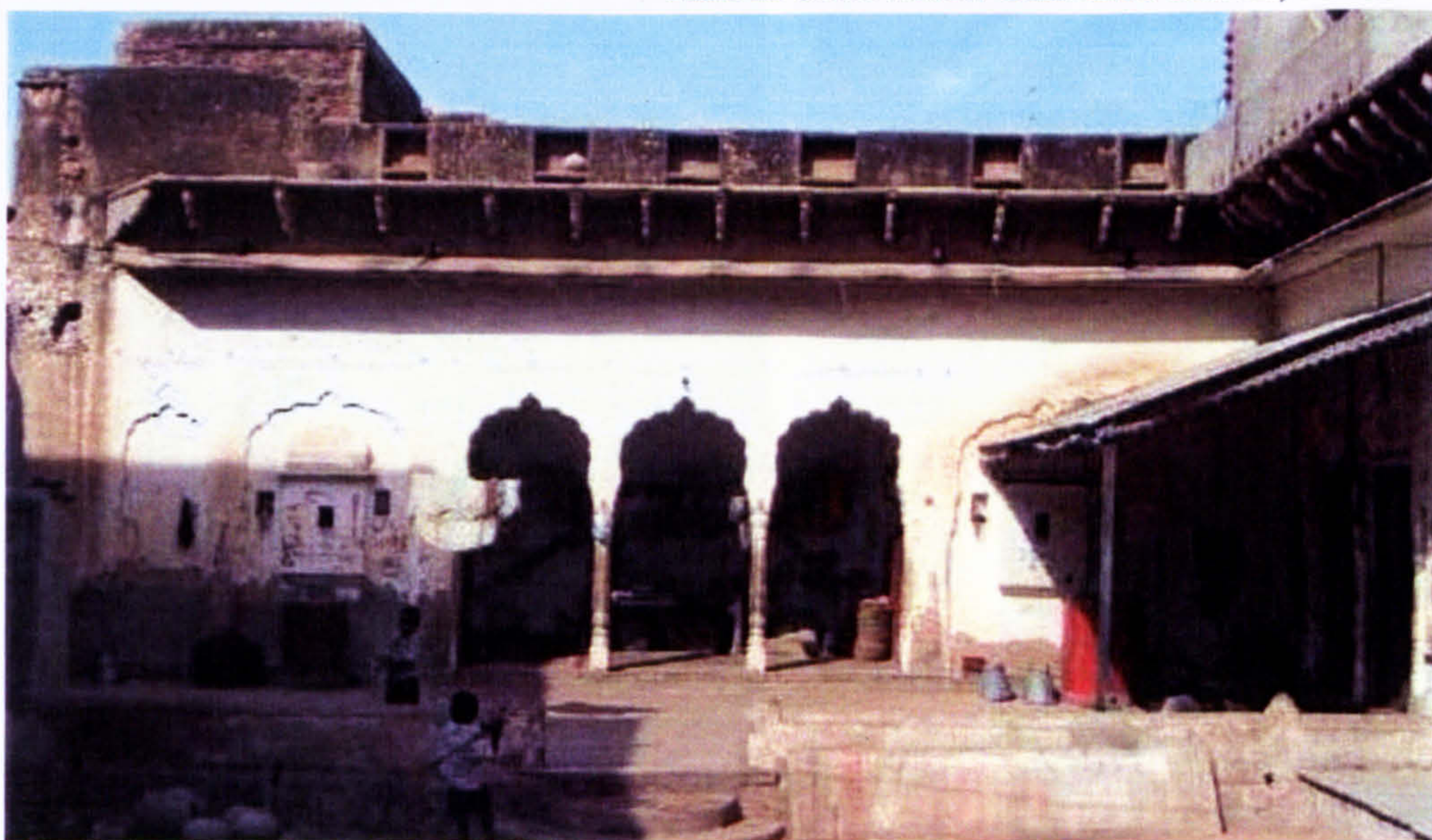
*Baithaks* in Shekhawati Havelis



*Baithak* view of a Haveli in Sikar



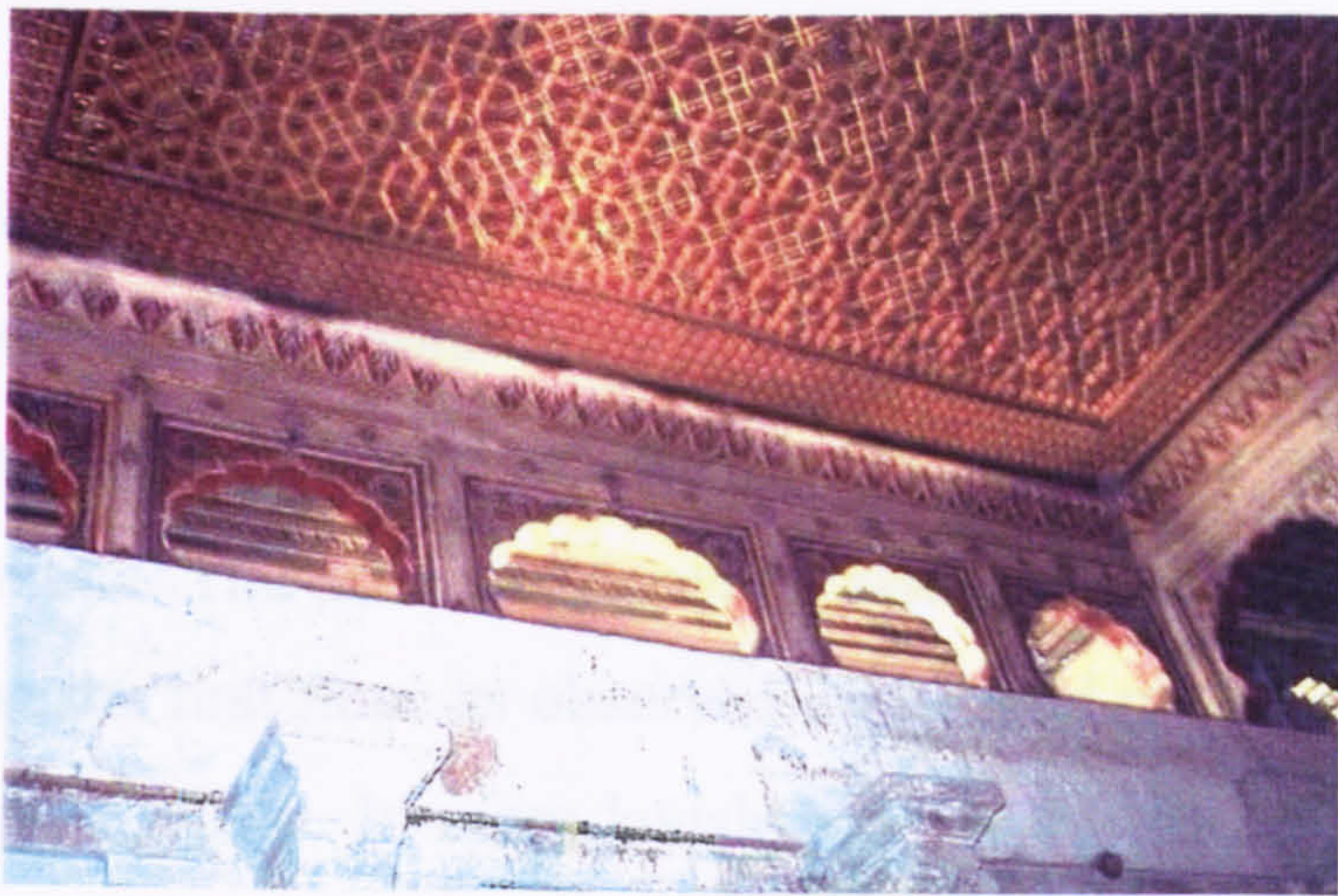
Hall in outer court. Chaumoo Haveli, Amber



*Baithak* from outer court. Jain Haveli, Jhunjhunu

**Figure 4.12 - *Baithak* Spaces in the outer *Maradana* court.**





*Mol with gold work on ceiling. Patwa Haveli, Jaisalmer*



*Mahal, Dhabhai Haveli, Udaipur*



*Mol in Suraj Haveli. Jaisalmer*



*Jharokhas for the King and the Queen in the Rang Mahal, Dhabhai Haveli, Udaipur*



*Rangmahal, Mathur Haveli, Jodhpur*



*Baithak in Bohera Haveli, Udaipur*

**Figure 4.13 - *Mardana* Spaces on Upper Floors.**



*Kaanch mol* and *hawa mol* in Suraj *haveli* at Jaisalmer were specially decorated rooms for visitors with mirror work and *jharokhas* respectively. Dhabhai *haveli* in Udaipur also has Meena *Mahal* with intricate *meena* work on walls and pillars. The affluent Marwaris also had lavish *baithaks* on ground floor and *Mol* on the first floor as observed in the gold plated ceiling of the *Mol* in Patua *haveli* of Jaisalmer. In more lavish *havelis*, the *baithak* and *mahal* were termed as the *diwan-i-aam* and *diwan-i-khas*. The halls of feudal lords were also termed as *diwankhanas* in Marwar and *darikhana* in Hadoti and Mewar region. The rooms for entertainment were present in more lavish *havelis* of Rajput *thakurs* and Muslim nobles. *Rang mahal* was used for evening entertainment by the performers as observed in Mathur *Haveli*, Jodhpur and Dhabhai *Haveli*, Udaipur. They were never found in the Marwari or Brahmin *havelis* due to the customs followed by these castes. A lavish *rang mahal* for 'nautch' (dance) girls is present in the Mathur *Haveli* in Jodhpur. There is a separate exterior entrance for the male visitors and a double height balcony from the interior *zenana* court accessed by the females to watch a performance. A similar and more lavish *rang mahal* is present in the Dhabhai *Haveli*, Udaipur (1610A.D.) with separate *jharokhas* made for the *maharana* and the *maharani* who would be invited to watch the performances. Professor Rehman of Tonk talks about the *mushaiara* performances in the *baithaks* of Muslim *havelis* too.

## 4.5 Service Spaces

Etymologically, the term for the service space, *nohra* derives from the Hindi term *navgriha*, literally meaning a new house. But in the *havelis*, this term was used for the annexe area.



In some *havelis*, *nohra* was a big outer court used for keeping the *rath* and *palakis* and for tying horses, elephants or cattle. The servants usually slept in the *nohra* area. In bigger *havelis*, a separate court was provided for servants as described in SangamSingh's *haveli* at Udaipur (Rama Mehta, 1977). This court was always at a lower level from the inner courts. In most *havelis* in Rajasthan, no toilets were made and in a few cases, an outside space or the *nohra* was used for ablutions. Clearly these activities were related to soiling of the house and were always performed outside except, in circumstances of birth. Otherwise, the *haveli* was sacred and free of these functions. In Jaipur and post Jaipur *havelis*, there were toilets on the terrace, with a duct going down to the service lane (*gandi gali*) on side of the *haveli*.

#### **4.6 Generic Principles Guiding the *Haveli* Form**

The *haveli* form, if understood in terms of traditions, rites and rituals introduces a new perspective. It is these cultic rituals in the life of family members that give meaning to the architectural spaces. It is possible to understand the conception of the *haveli* plan from the centre outwards and the perception of the movement towards the centre in consonance with the Hindu philosophy of centric evolution. This alternating rhythm of diverging and converging movements introduces a dynamism in the form which was until now perceived as static. The courtyard and its rituals create an inside-outside polarity within the archetype. The spatial evolution of the *haveli* form establishes that the functional needs of the family members were secondary to the rituals that determined the form. This is further supported by the fact that original owners residing in some of the *havelis* have changed the location of the kitchen, toilets, sleeping spaces etc. yet the rituals are still performed in the centre of the courtyard.



The above study of the *haveli* spaces and the social and religious rituals establish the following principles of the *haveli* form in Rajasthan.

a) The *haveli plan* evolved around the centre of the court with the court as the primary space. This is the essential core of a *haveli* and the life cycle of the owner and his family revolves around this locus.

b) The entrance or access demarcates the threshold to this centre or the sacred ritual court. This entrance is the next significant space for the family members, serving as a means of communication with the outside world.

Whatever the size and the scale of the *haveli*, the above primary spaces are present in all cases.

c) Secondary spaces evolved around these centres in various combinations of the *tibaris* and *chaubaras* as the needs expanded with separate sections for *zenana*, *mardana* and servants. A hierarchical marking of the centre of these spaces is also observed during festivals and ceremonies. Thus the spatial evolution of a multi court plan can be studied by locating the centre of the inner court, and subsequent sub centres with hierarchical access points to the centre.

On an average 25-100 family members were staying in each *haveli* complex. Sarah Tillotson (1995) mentions 200 family members in the Haldia *Haveli* at Jaipur. This included the family members and servants. The functional division of the spaces was at a very general level. There were no specific functions attached to the rooms of the *haveli*. The activities moved from the court to the rooms depending on the time of the day and the weather. The festive demarcations on each occasion were evident from the entrance door to the prayer room with floor patterns or other symbols at the centre of each space like the *poli*, *chowk*, *tibari* and *chaubara*. This was a clear definition of the path for



the deity. It is interesting to note that all the symbolic patterns used at the time of festivals have the harmonious proportions of the *mandala*, reinforcing the fact that these symbols evolved as a result of man's interaction with nature and the polar worldview. The nine grid, multi centric form is clearly a basic organizing principle in the social and architectural traditions of Rajasthan.

Previous research works (Aman Nath and Waczirag, V.S. Prammar, Kulbhushan Jain) have assumed that the two-court *haveli* was a social outcome of the division between *zenana* and *mardana*. However, in the field visits, it was found that this polar division existed in the basic family unit. A family unit could have one or more *havelis*. Thus, a two court *haveli* if part of a bigger complex did not necessarily house the females inside and the men outside as observed in Hasukhlal Kasliwal's *Haveli* in Jaipur. It is more relevant to say that the society and architectural form was based on the harmony of polar opposites. Thus a basic dwelling unit or family had a clear demarcation and balance between the male and the female members. Very few furniture pieces were kept inside the rooms and they were all low leveled. The usage of rooms was flexible. They come as a byproduct of the plot and the courtyard and were used as convenient. Prammar (1987) mention that except for the hearth, no part of the dwelling unit has any permanent function. He holds the lack of furniture to be responsible for this amorphous spatial use. But, it was this basic existential worldview of centrality and polarity that resulted in an absence of furniture and flexibility of movement. Everything moved around the locus. The above observations regarding the rituals in a *haveli* support Egenter's theory that

Festivals evolve from rural agrarian life, later on accumulating religious connotations and are always observed in cyclic time. Value system finds expression in festive demarcation, in the social



obligation to unite in front of the interior cultic place and by carrying out certain cultic actions. The festive demarcations are observed in specific place at the time of the festival. The individual is socially integrated in any house through the many social obligations. The cultic performance relates the individual living space of the family to the general unity of the society as a whole.<sup>5</sup>

The families still residing in the *havelis* for the last few centuries follow the traditional rituals and have the actual marriage ceremony with the *mandap* in the courtyard e.g. Bohra *Haveli*, Jhalawar. In cases of families that have moved from the towns and retain the *haveli* as in towns of Shekhawati, the *haveli* has become a ritual site. Often the family would bring a newly married couple to the *haveli chowk* to pay respects to the *kul-devi* (clan goddess). 'Although building shapes roughly express these ideas, their importance can only be fully apprehended through rituals, for the ideas of center and duality are enforced in a comprehensive belief system that guides social conduct.'<sup>6</sup>

Beyond these generic principles a few sub regional spatial variations are observed.

#### **4.7 Sub Regional Variations in the *Haveli* Plan** (Figure 4.14 and 4.15)

Variations in the architectural form are a response to the cultural, topographical and climatic changes and the available resources in the region. The variations in *haveli* plan due to topographical changes and cultural impact of caste have already been discussed in the previous chapters. The sub regional variations in the form due to available materials are described in the next two chapters.

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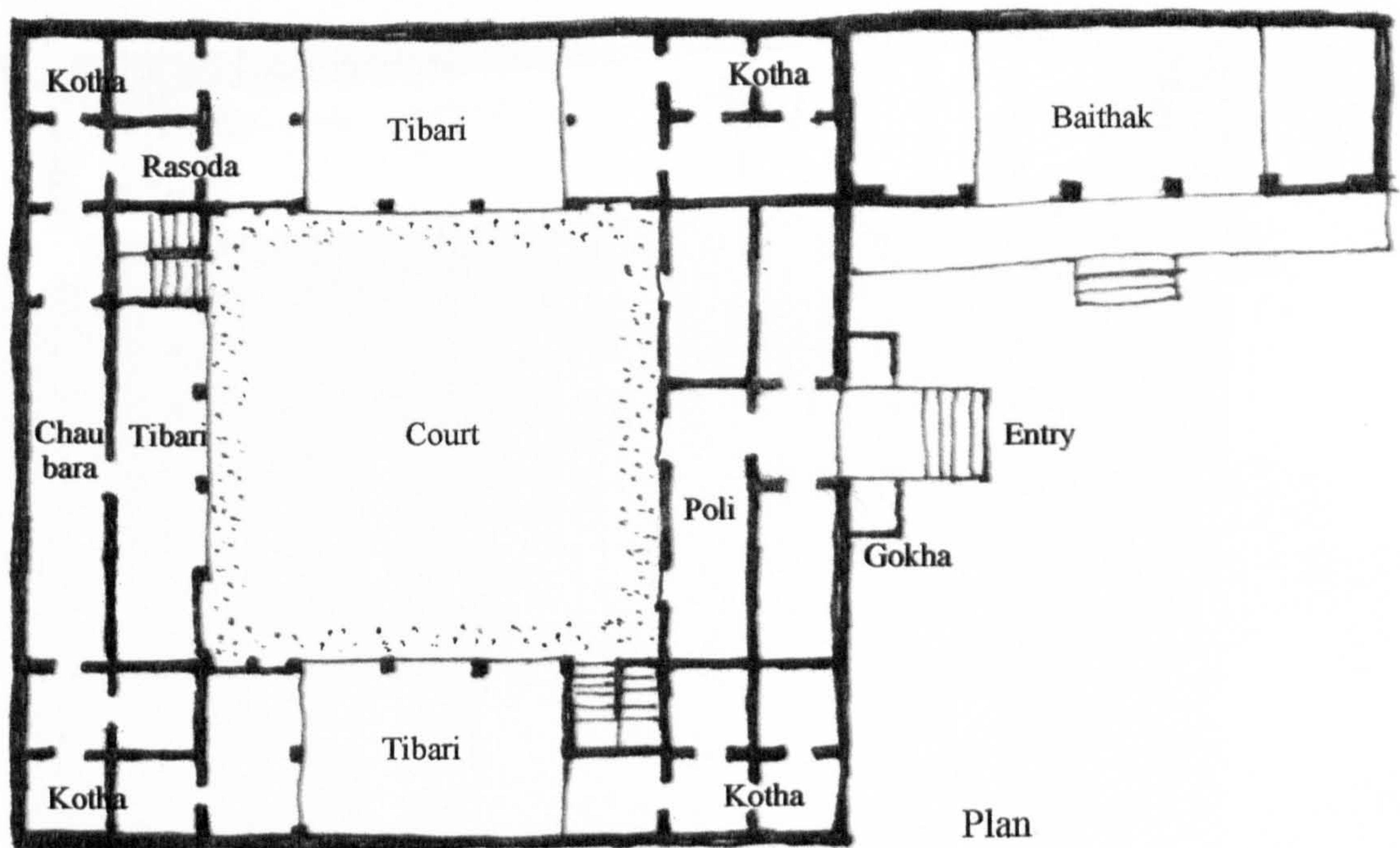
<sup>5</sup> Egenter, Nold, 1992, p.?

<sup>6</sup> Gunawan Tjahono. in *Traditional Dwellings and Settlement*, 1989, p.234

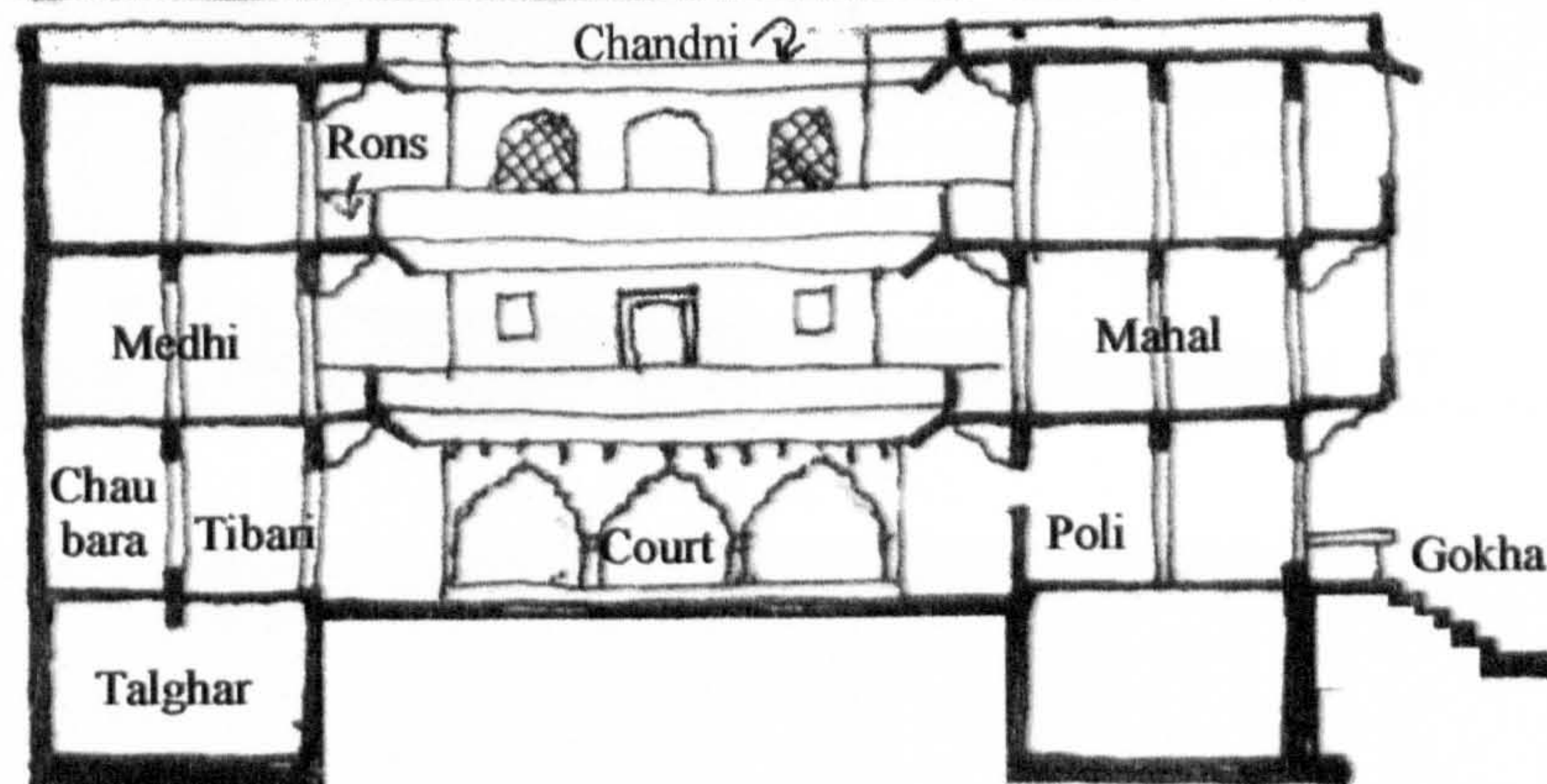


At the spatial level, a few variations are evident in the basic plan. Two types of layout are evident in the *haveli* plan across Rajasthan. The *havelis* of eastern Rajasthan including sub regions like Dundhar, Hadoti, Merwara, Mewar, Mewat-Brij and Shekhawati have a concentric layout with a large square or rectangular court whereas the *havelis* of western Rajasthan including sub regions like Marwar, Godwad, Vagad and some towns of Mewar show a linear layout with a smaller court, similar to the *havelis* found in the adjoining region of Gujarat. The spaces on the two sides of the court are similar in both layouts, usually housing the staircase, kitchen, water space and prayer space. But spatial variation is observed in the front and back rooms of the courtyard. The entrance in the eastern Rajasthan layout is marked with two sitting platforms or *gokha* on either side, followed by a transitional space *poli* and the backspaces have the *tibari* or semi covered verandah followed by a large room or *chaubara*. On the other hand the linear plan of Western Rajasthan has an *otta* or a sitting platform (verandah) in the front and two or three storage rooms or *ohras* at the back. The etymological variations in the spatial terminology are explained in Table 4.3.

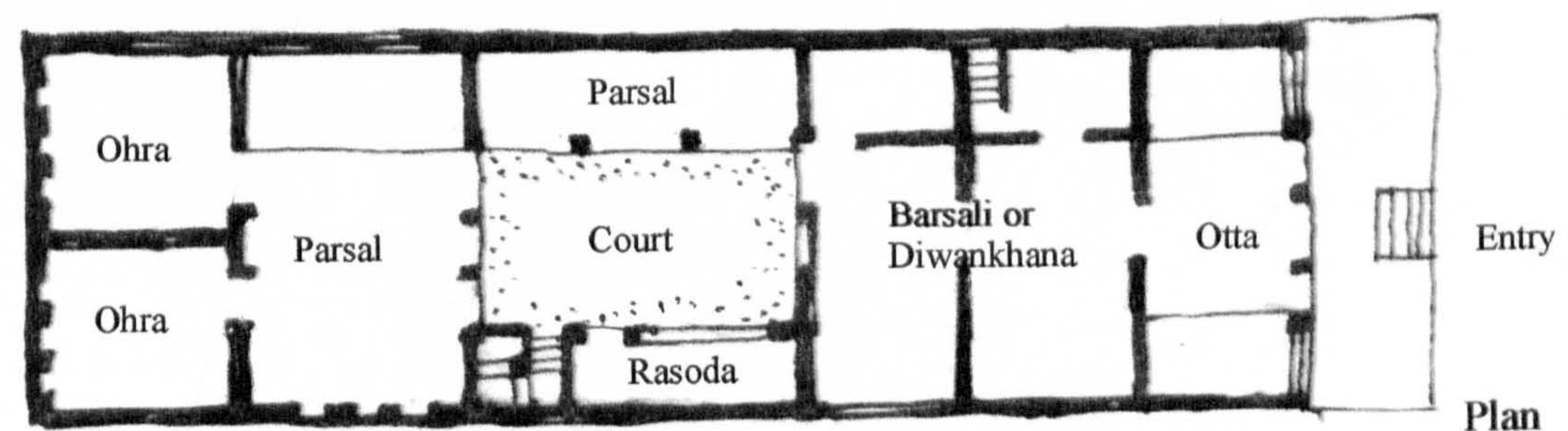




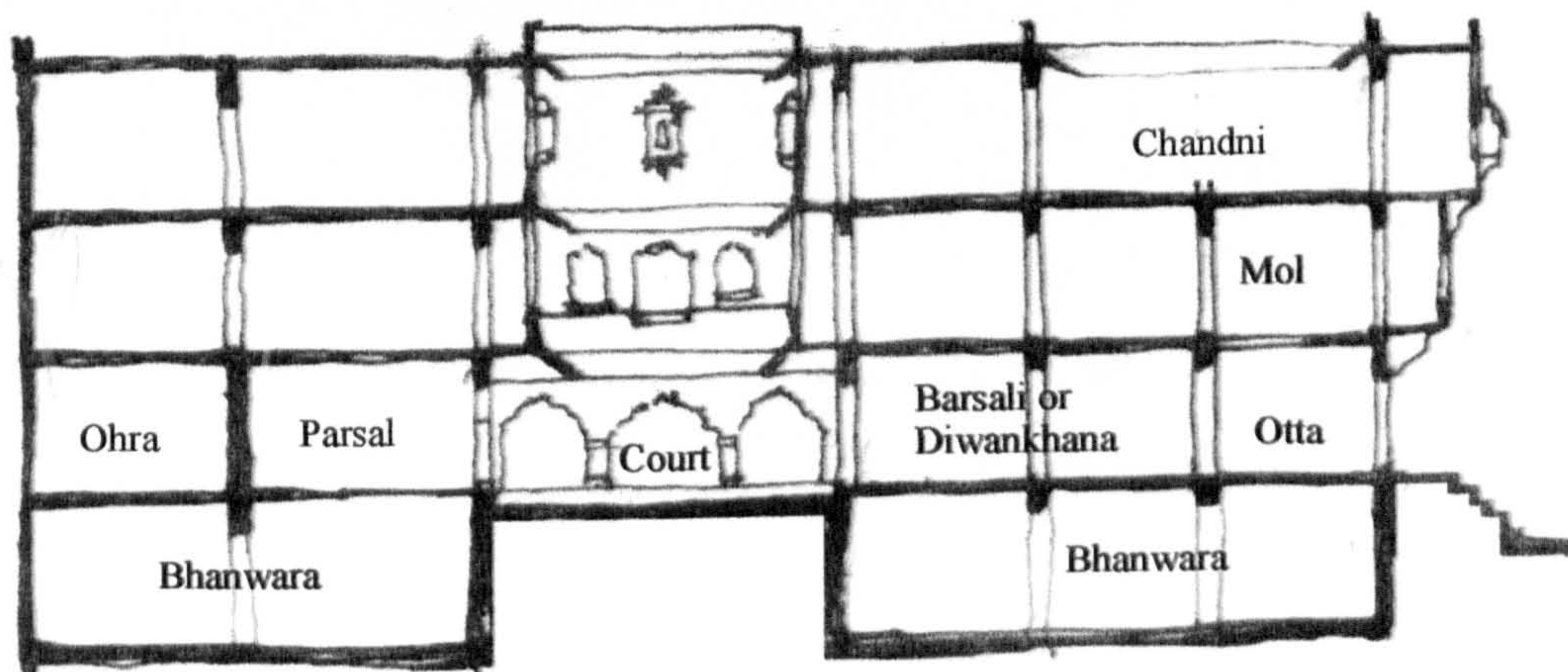
Plan



Section through Court Centre



Plan



Section through Court Centre

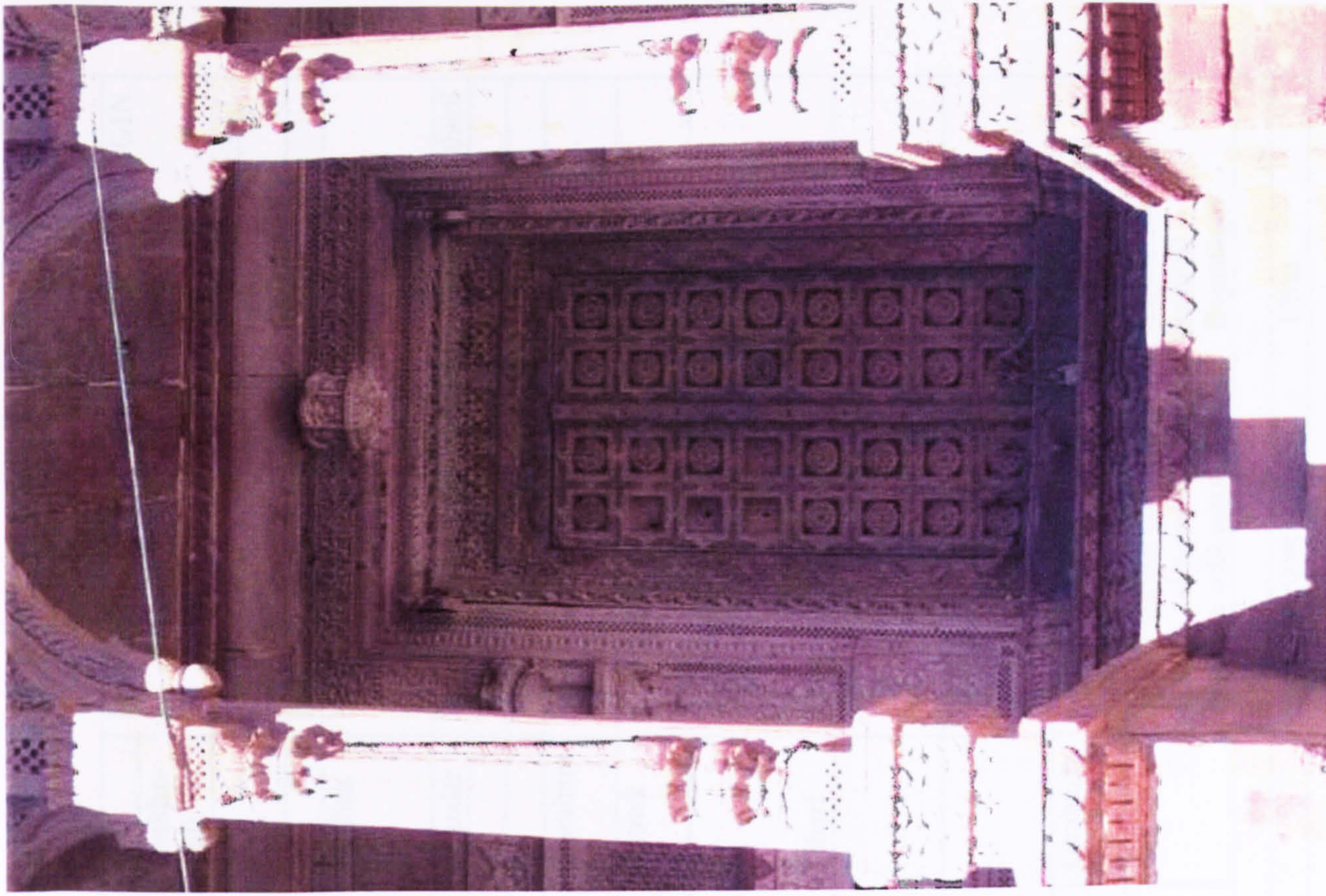
Typical Layout in Western Rajasthan

Figure 4.14 - Sub Regional Variations in the *Haveli* spaces.





Typical entrance in Eastern Rajasthan with *gokhas* on either side. Lodha Haveli, Ajmer



Typical Entrance in Western Rajasthan Havelis through *otta*,  
Roshanlal Haveli, Pokhran

**Figure 4.15 - Sub Regional Variation in Haveli Entrances**



Table 4.3 – Terms used for *Haveli* Spaces

TERMS IN DIFFERENT REGIONS OF RAJASTHAN							MEANING AND ETYMOLOGICAL ORIGIN	
Dundhar	God-wad	Hadoti	Marwar	Merwara	Mewar Vagad	Mewat-Brij	Shekha-wati	
Ala / Tak Aliya								Niche Small Niche Hindi/Rajasthani
Asalkhana								Room for weapons Urdu
Baithak		Darikhana	Diwan Khana	Baithak	Darikhana	Baithak	Baithak	Male sitting/Living Room Hindi
Diwan-e-Aam						Diwan-e-Aam		Urdu
Bhandar					Bhandar		Bhandar	Store Hindi/ Rajasthani
Chandni								Terrace room with open roof Rajasthani
Chat								Terrace /ceiling Hindi
Chaubara	Ohra	Chaubara	Ohra	Chaubara	Chaubara Ohra	Chaubara	Chaubara	Back room behind court Rajasthani Gujarati
Chowk	Chowk	Chowk	Chowk	Chowk	Chowk	Chowk Sehen	Chowk	Courtyard Hindi Urdu
Dalan	Parsal	Dalan	Parsal		Patshala Parsal Paigah	Dalan		Verandah around court Hindi
Tibari		Tibari		Tibari		Tibari	Tibari	Three arched verandah Hindi
Darwaaza / Dar Baro Merno								Door Urdu/Hindi Rajasthani Rajasthani
Dehli								Threshold Hindi
Dehleez								Persian
Deodhi								Rajasthani
Ghubaria						Ghubaria	Ghubaria	Store/ Loft Rajasthani
Ghudsal								Stables
Gokha		Gokha	Otta	Ghoka	Gokha/ Otta	Gokha	Gokha	Sitting outside entrance Rajasthani
					Gokhda			Outside colonnaded platform Gujarati
								Jharokha with seating Rajasthani
Hammam								Bath
Khana								House or room Urdu



Table 4.3 – Terms used for *Haveli* Spaces

TERMS IN DIFFERENT REGIONS OF RAJASTHAN							MEANING AND ETYMOLOGICAL ORIGIN	
Dundhar	God-wad	Hadoti	Marwar	Merwara	Mewar Vagad	Mewat-Brij	Shekha wati	
Kotha/ Kothar / Kothdi								Store Rajasthani
Mor/Mori			Khaai					Common toilet Hindi/Rajasthani
Mahal /Rang Mahal			Mol		Mahal	Mahal		Space for entertaining guests on upper floor Urdu
Medha/Medhi								Back room on first floor usually for storing grains. Rajasthani
Naal Jina Sidi								Staircase Rajasthani Persian Hindi
NaubatKhana / Naqqarkhana								Space for announcements with an instrument called 'Naubat' Urdu
Nohra								Annexed area with Haveli, used for services Rajasthani
Parinda								Water space Rajasthani
Pedkala								Sitting Space above stairs Rajasthani
							Pitar ji ki Modh	Space for ancestral deity Rajasthani
Poli		Poli	Barsali	Poli	Barsali	Poli	Poli	Lobby/Foyer Rajasthani
Pothei Khana								Library Urdu
Puja								Prayer space Hindi
Ravish/Rons						Ravish/Rons	Ravish/Rons	Projected balcony around the court Hindi/ Urdu
Rasoi/ Chulha-chowka Rasoda								Kitchen Hindi/ Rajasthani
Sal								Big room with vaulted ceiling Rajasthani
Talghar/ Tehkhana/ Bhanwara								Underground space Hindi/ Rajasthani
Tosh Khana								Room for storing valuables Urdu



## 5 Composing the *Haveli*

Along with the ritual evolution of the spaces, the built form simultaneously evolved using definite principles of composition in coherence with the centric worldview. The formal evaluation of the *haveli* façades in the first section of this chapter is intended to read the architectural linguistics of the façades and to identify the guidelines of composition and their link to the spatial configuration. The compositional guidelines, the aedicules and the elements in the façades are essential components of this architectural language. In the first section, this chapter describes these three components and establishes the generic principles for façade composition that are applicable to both symmetric and asymmetric *haveli* façades.

The architectural grammar of the *haveli* façades can be understood by identifying the different aedicular forms and the rules in placing these forms on the façades ‘What makes traditional Indian religious architecture (and indeed Indian traditional monumental secular architecture) more fundamentally representational than any other, is the language of aedicules – of miniature building-depictions or shrine images.’<sup>1</sup> A rich variety of these aedicules is observed in the *haveli* façades. Hence, after identifying the principles of composition, this chapter describes the assembled elements used in the compositions i.e. the aedicules. It classifies the various forms of the aedicules and analyses their usage in the façades. Examples of façades from different regions of Rajasthan are then analyzed using this architectural grammar. It also documents the various elements used in the façades and aedicules. The elements are categorized region wise and although dates are also specified, a

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<sup>1</sup> Hardy, Adam. *A+D*, Nov.-Dec.1997, p.75.



stylistic evolution is intentionally not attempted. The placement of a particular style of element in the façades is related more to the personal whims and fancy of the *haveli* owner or the mason, hence a detailed stylistic analysis might not be very fruitful. This chapter focuses more on the basic principles as opposed to the stylistic trends. The intention of the research is to discover the link of the formal compositions to the spatial planning dealt in the previous chapter and constructional constraints described in the following one.

The second section of this chapter identifies the broad stylistic variations in the form and the sub regional variations of the *haveli* façades in Rajasthan.

## **5.1 Architectural Grammar of the *Haveli* Façades**

### **Basic Principles of Façade Composition**

The *haveli* façades also conform to the two guiding principles used in the spatial planning - demarcation of the centre and demarcation of the access points i.e. the entrances or openings. The façades also reflect the concentric development of the *haveli* plan. The significance of the inner ritual court in the plan form has already been explained. This is also a significant reference point in the façade composition as all the *haveli* façades evolve from this point. The inner court is the first zone to be demarcated during construction so the inner court elevations would be the first to come up. In fact, in most *havelis* the inner court façades are given more significance than the outer elevations. The façades are conceived from the inner court to the outer and exterior, with more emphasis on the treatment of the inner court façades. A fact that is evident in Nachna *Haveli*,

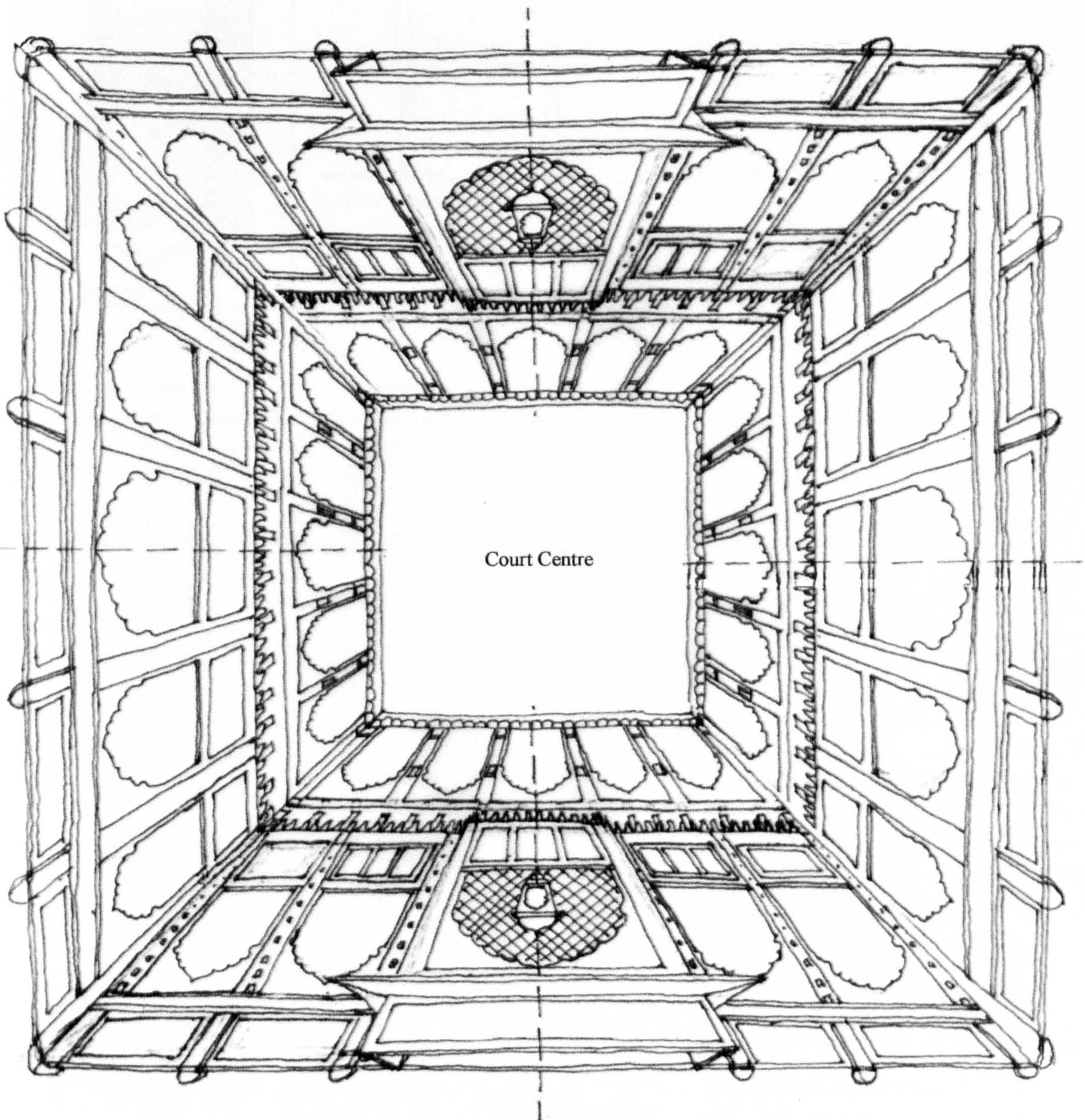


Jaisalmer or Khurrewali *Haveli*, Alwar where the interior court elevations are treated elaborately and the exterior street façade is still incomplete. This is also evident in the Shekhawati *havelis* where the paintings in the inner court façades are more intricate than the ones on the outer elevations. Since most celebrations and ceremonies were carried in the inner court it makes sense that the court façades should be most elaborate in this space. Hence, the principles of composition are explained in a step-by-step façade analysis of a double court generic type moving from the inner court to the outer street.

### **Defining the Centre - Court Elevations**

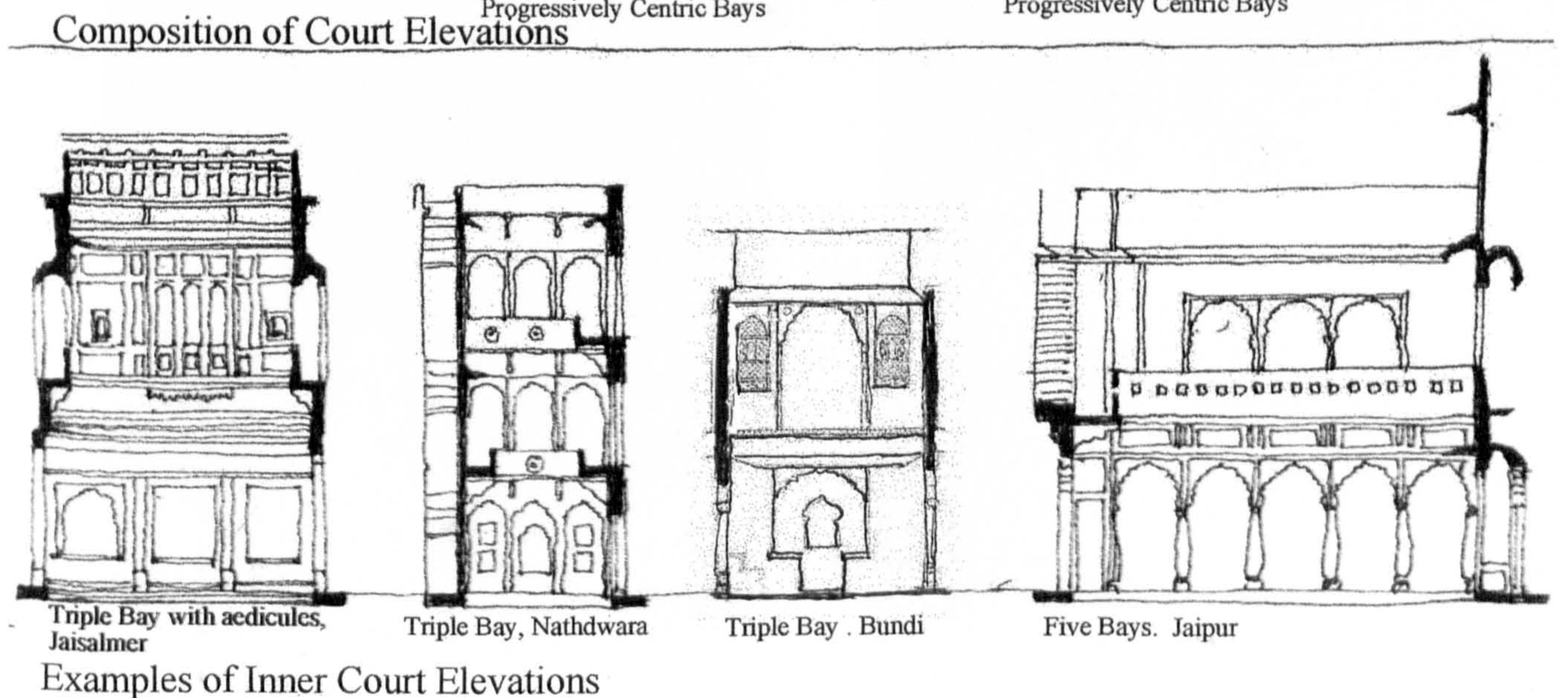
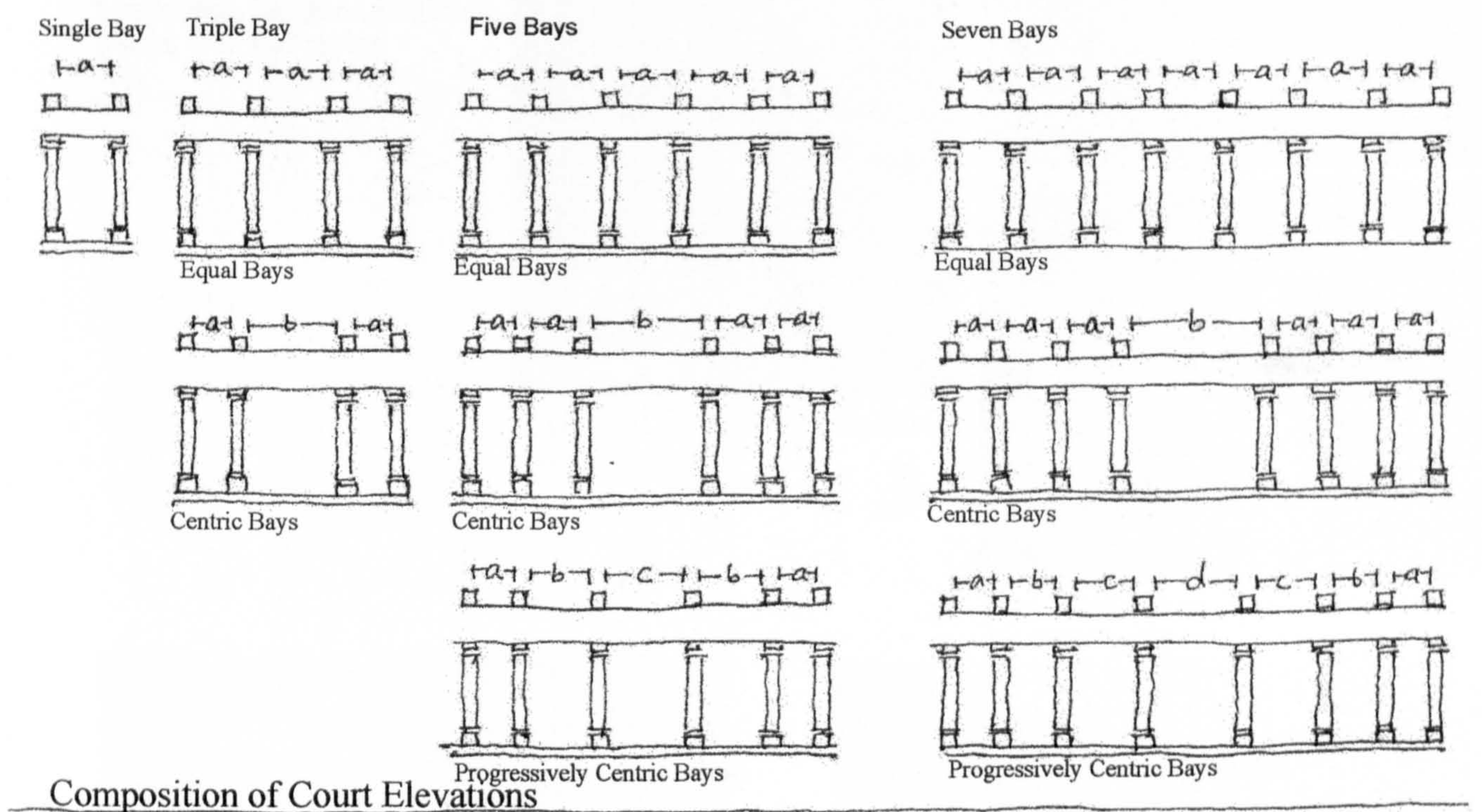
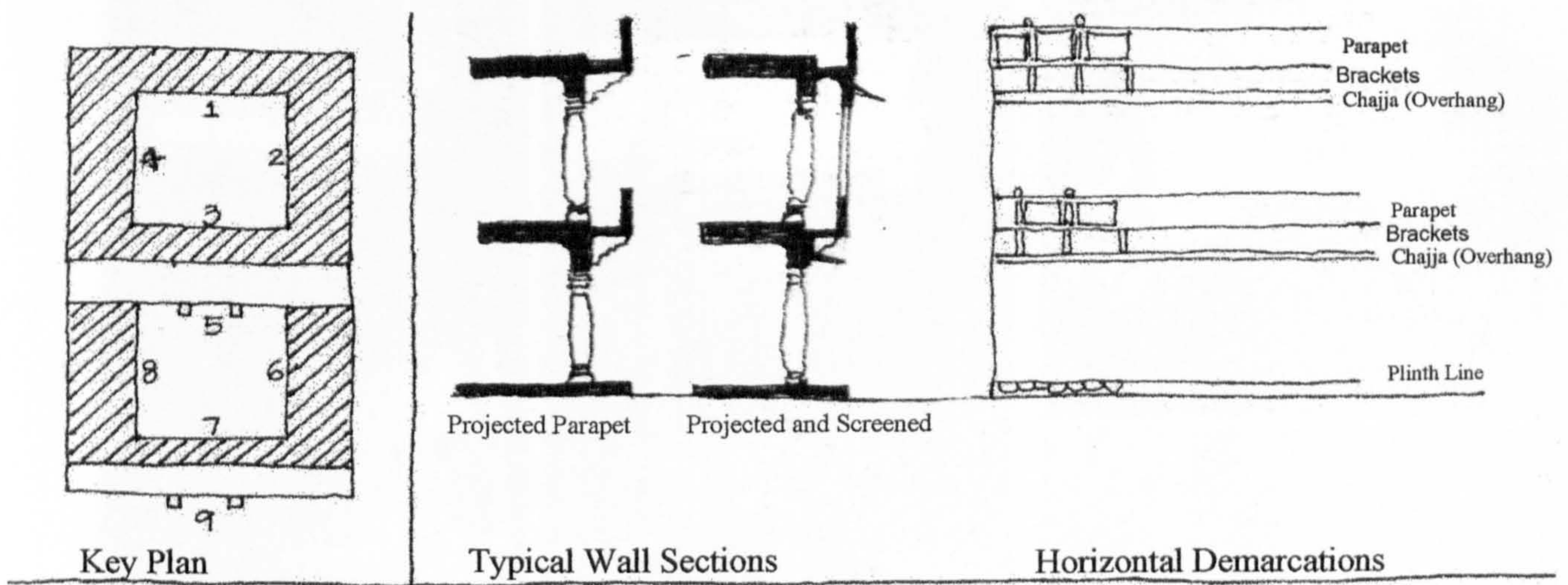
The concept of a centre is paramount in all aspects of traditional Indian architecture. The multicentric *haveli* façades can easily be read by identifying the centres and the sub centres in the façade, which correspond to centres and sub centres in the plan form. The concentric projections of the inner court elevations in Figure 5.1 shows the centric evolution of the court façades. It is observed that the centre of the inner court coincides with the centre of the court façades on all sides. The inner court is either rectangular or square and the court elevations are symmetrical. Figure 5.2a shows the compositions of inner court elevations. Opposite elevations show equal number of divisions and in case of a square court all four sides echo similar divisions. The court elevations show centric divisions in odd numbers 3,5,7,9,12 depending on the size of the courtyard. Most often 3-5 divisions are present. These divisions are normally marked by single or double row of columns crowned with brackets and arches forming the façade for the semi covered *tibari* space. The bays could be open with arches or screened with aedicular openings in the centre. Further treatment of the court facades is related to the functions at each end.





**Figure 5.1 - Concentric Composition of Inner Court Elevations**





**Figure 5.2a - Composition of Inner Court Elevations 1,2,3,4,6,7,8 in a Typical Double Court *Haveli***

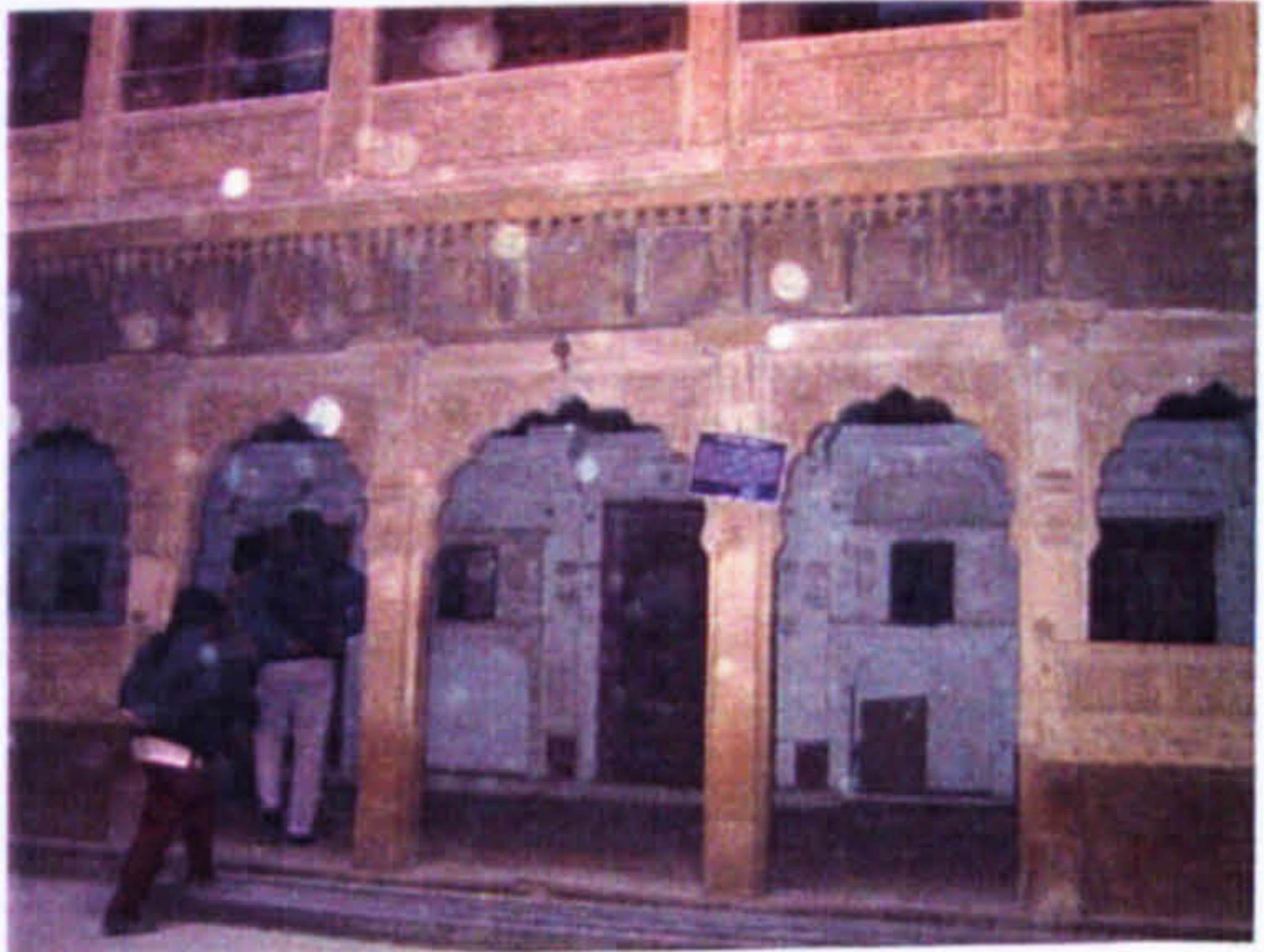




Single Bay, Singhion Ki Haveli,  
Sirohi, Godwad region



Triple Bay, Suraj Haveli, Jaisalmer,  
Marwar region



Five Bays, Patwa Haveli, Jaisalmer,  
Marwar region



Seven Bays, Mathurawalon Ki Haveli,  
Tonk , Mewat- Brij region



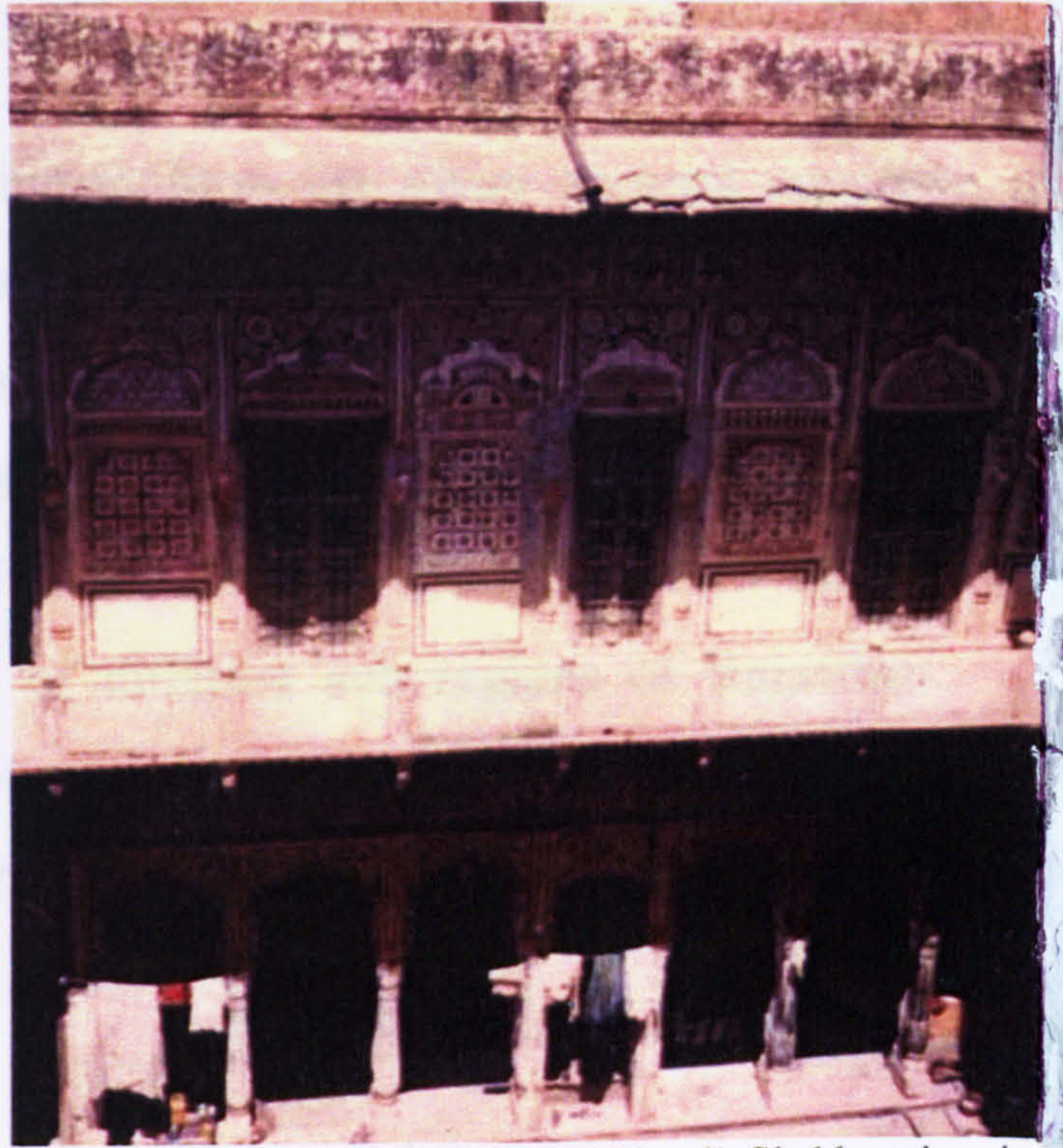
Triple Bay, Bohra Haveli, Jhalawar,  
Hadoti region

**Figure 5.2b - Inner Court Elevations**





Five Bays, Paliwal Haveli, Udaipur, Mewar region



Multiple Bays. Marwari Haveli. Shekhwati region



Five Bays, Patwa Haveli, Jaisalmer, Marwar region



Seven Bays. Amet Haveli. Udaipur, Mewar region



Nine Bays, Bade Miya Haveli, Jodhpur, Marwar region

**Figure 5.2c - Inner Court Elevations**

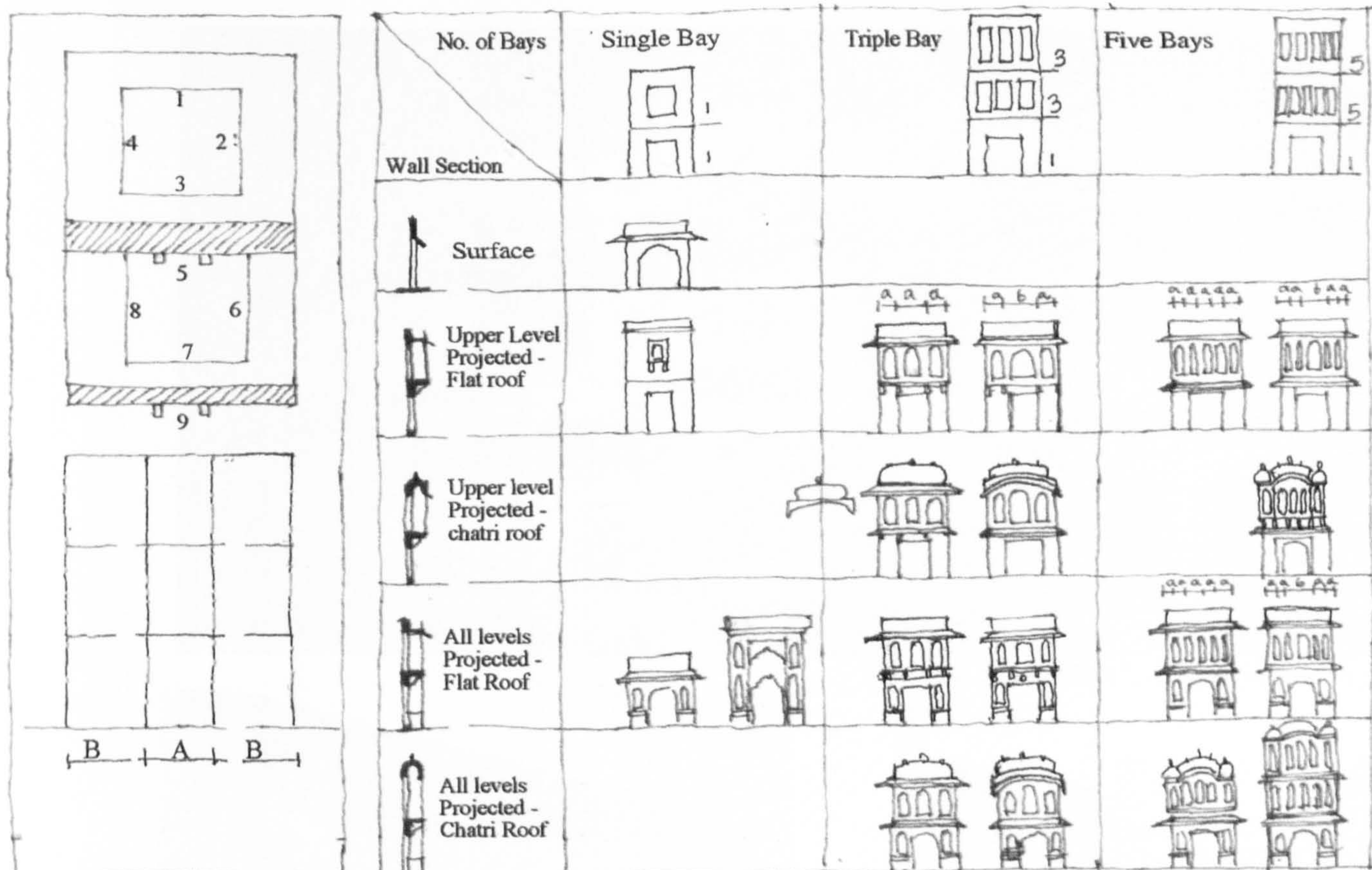


A single bay might house a staircase to the upper floor or a decorative niche for the water pot, three open bays combine to form the *tibari* or semi covered veranda or they might be screened to form the kitchen on one side as in Jaisalmer *havelis*. The outer court elevations also follow the same principles, except for Elevation 5 that demarcates the entrance to the inner court and is treated like the exterior Elevation 9. Figure 5.2b and Figure 5.2c show images of inner court façades in the *havelis* of different sub regions of Rajasthan. Stylistic variations are evident in court elevations of Marwar *havelis* and Shekhawati *havelis*, which are more ornate than others, following the Marwari pattern.

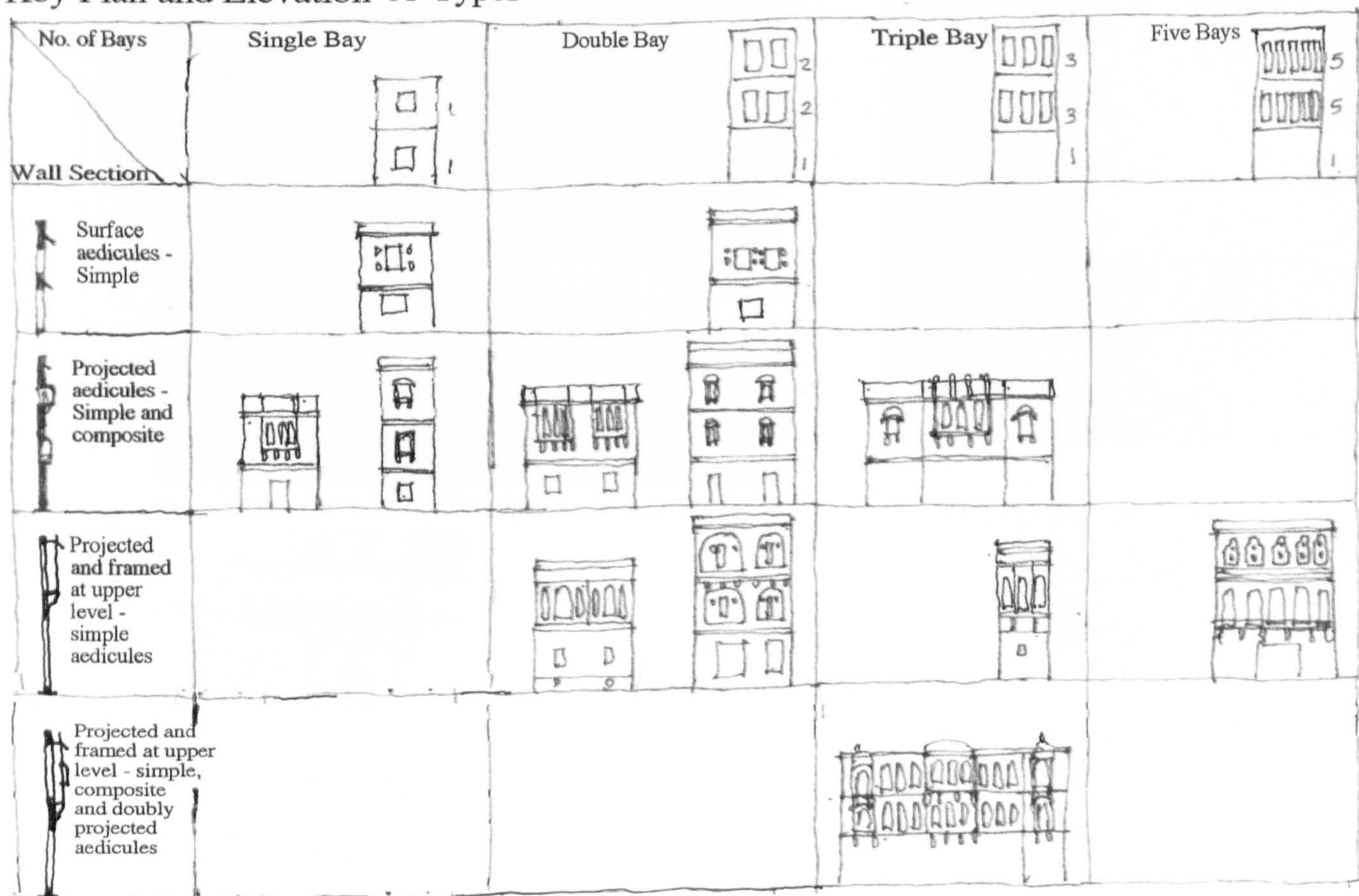
### **Defining the Entrances and Openings – Exterior Elevations**

Elevation 5 marks the entrance door leading to the inner court (Figure 5.3a). In some cases like in Amber *havelis* the inner court entrance is to the right than this elevation comes on the right side i.e. Elevation 6. This is treated like an exterior façade as it marks the entrance to the main court. The centre of the inner court is defined by this entrance in the outer court façade and in most cases, it reflects in the entrance demarcated on the street façade. Although Elevation 5 and Elevation 9 are similar in composition, the aedicules used depends on the hierarchy of the entrances. In the exterior elevations the centre of the court is demarcated by either a projected aedicule on the façade or framed by two projected aedicules as in Pandit Shivdin *haveli*, Jaipur. Figure 5.3a shows the composition of this elevation. The ‘A’ types are the entrance aedicules and are most often located in the centre of the façade corresponding to the court centre in the plan. In a few cases, due to site specifications this might be located on a side of the façade as observed in Bhawani Singh *Haveli*, Bundi (Figure 5.3b).





Key Plan and Elevation 'A' Types



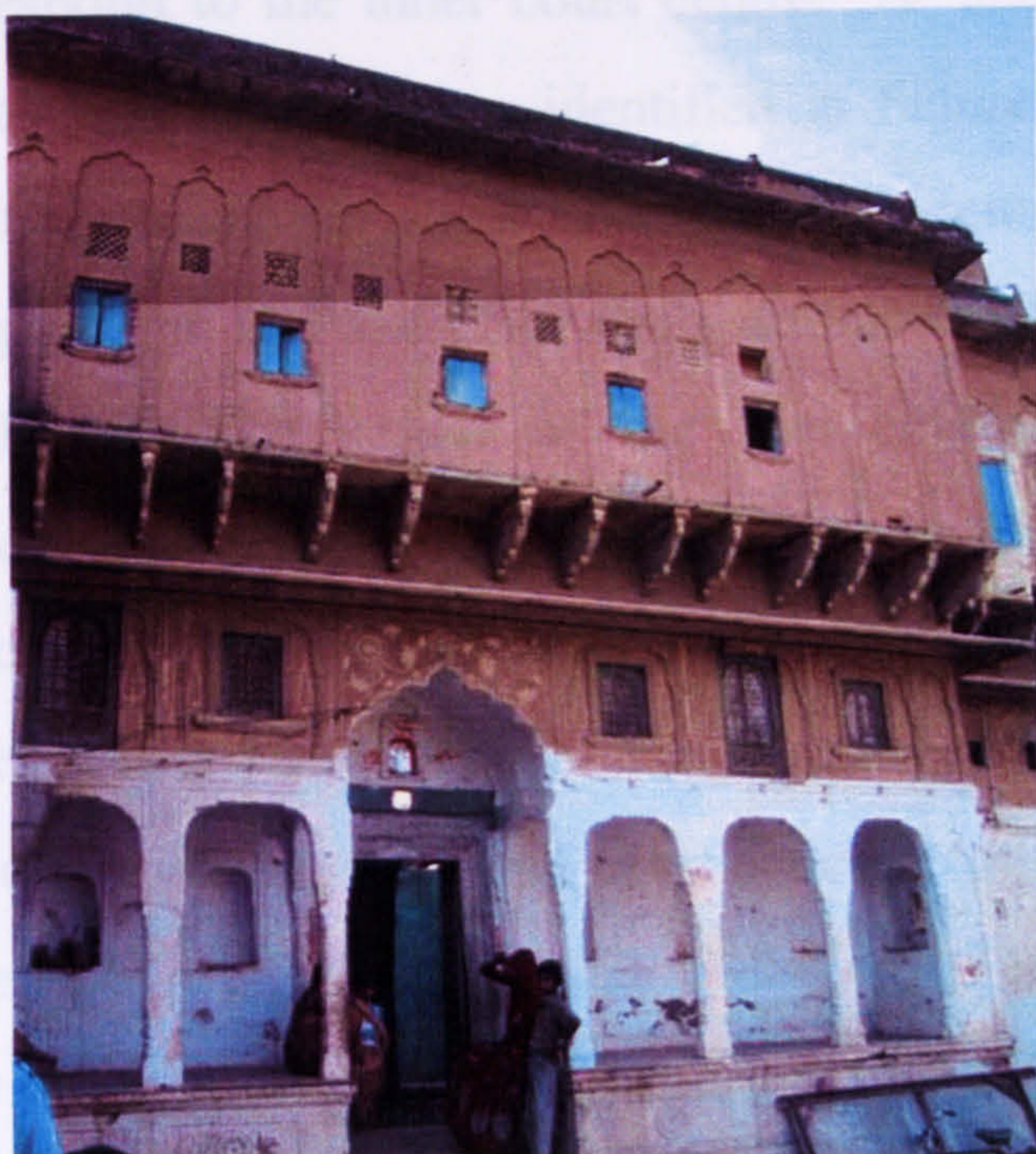
'B' Types

Figure 5.3a - Composition of Elevation 5 and Elevation 9 in a Typical Double Court *Haveli*





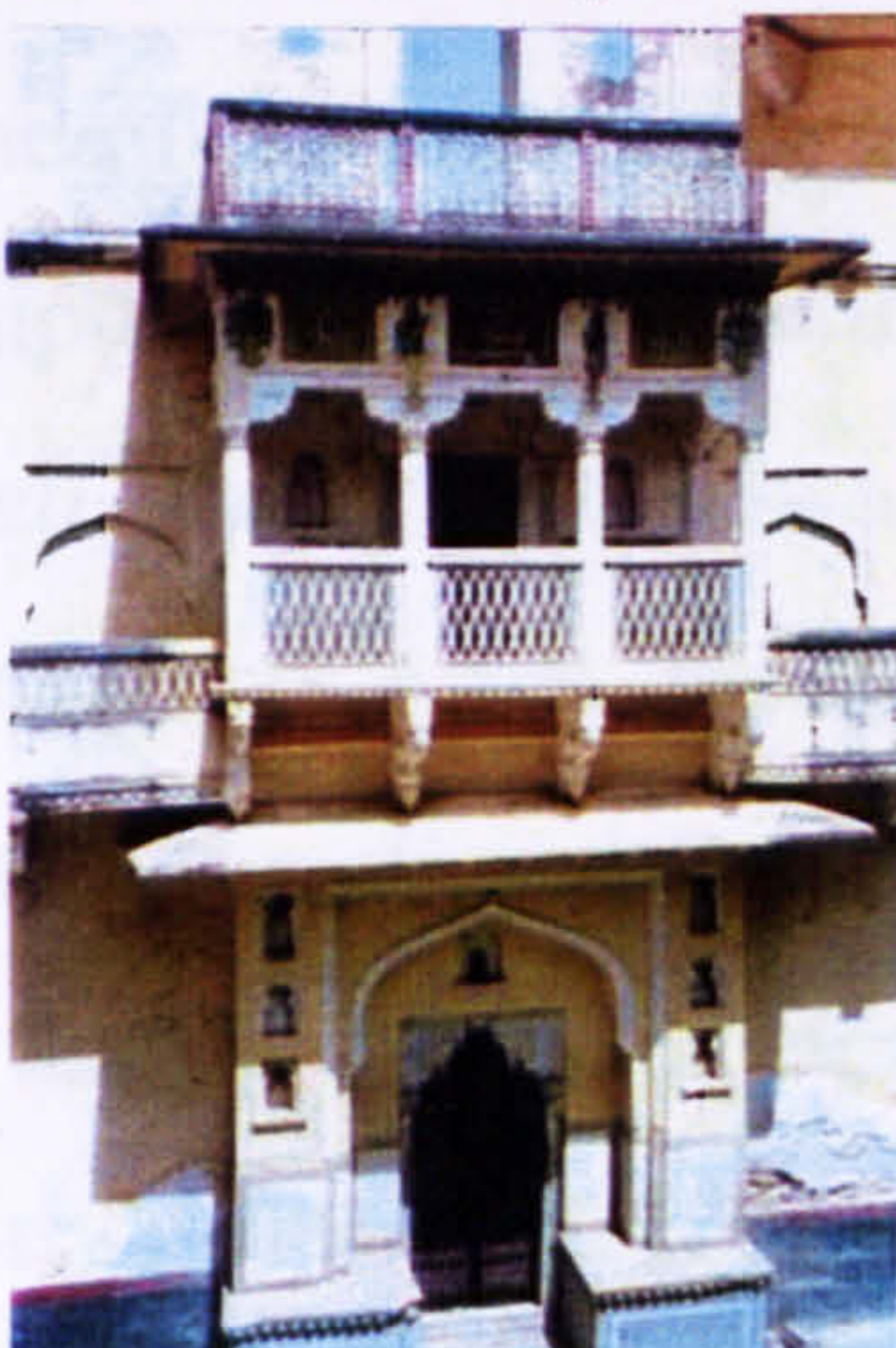
Bhawani Singh Haveli, Bundi, Hadoti region



Jain Haveli, Jhunjhunu, Shekhawati region



Patwa Haveli, Ajmer, Merwara region



Chaumoo Haveli, Amber, Dundhar region



Bhatt Haveli, Amber, Dundhar region

**Figure 5.3b - Elevations of Outer Court with Entrances to the Inner Court**

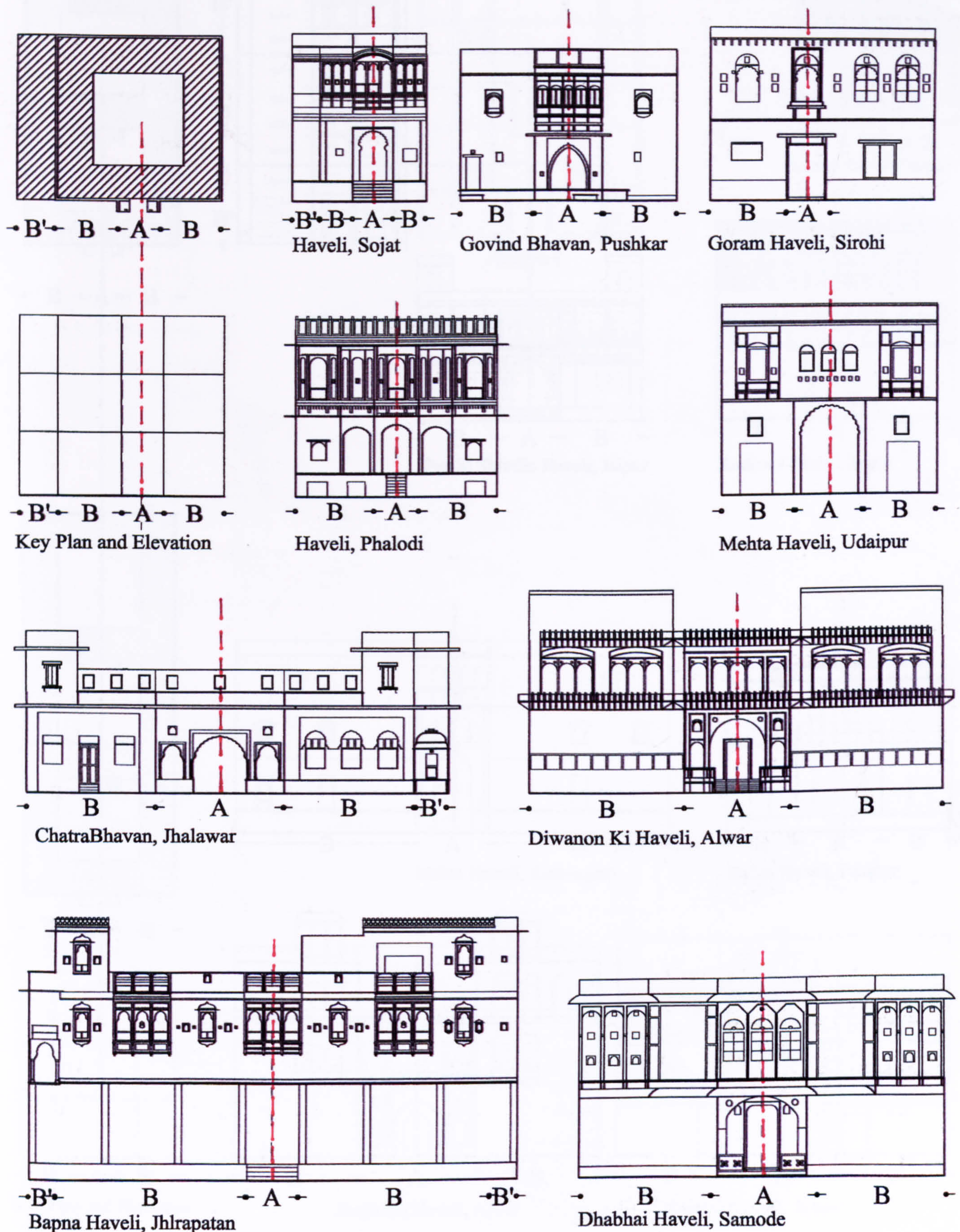


‘B’ types show the various possible placements of the opening aedicules. In this case too, the opening aedicules are located centrally in each bay corresponding to the centre of the spaces in the plan form.

In a similar manner the façades of multiple court *havelis* are derived by projecting the centres. The centre of the inner court works as a key point in understanding the evolution of the *haveli* façades. Figure 5.4 and Figure 5.5 show examples of single and double court façades where the entrances correspond to the inner court centre. ‘A’ and ‘B’ types marked in these *havelis* correspond to the forms identified in Figure 5.3a. The single *haveli* façades at Sojat and Jhalawar show how the court centre reflects outside in an asymmetric composition. In Pandit Shivdin’s double court *haveli* at Jaipur, the side elevation emphasizes the centre of the two courts by framing them with projected aedicules on each side. Figure 5.6 shows similar façade compositions depicting the centre of inner and outer courts in double and multiple court *havelis*. In the upper section, a two court *haveli* façade with longer side facing the road reflects the court centres. Similar centric demarcations are observed in the multicourt *havelis* below. An appropriate reading of the façade can thus reflect the plan type of the *haveli*.

Some of the interesting examples of façade reading are observed in Amet *haveli*, Udaipur and Pal Thakur *haveli* in Jodhpur (Figure 5.7) and also, in Natani *haveli*, Jaipur and Patwa *haveli*, Ajmer (Figure 5.8 and Figure 5.9). Pal Thakur *Haveli* and Amet *Haveli* are sprawled out *havelis* in Rajput pattern whereas Natani *Haveli* and Patwa *Haveli* are multi court *havelis* on Marwari pattern. In the first two *havelis*, despite the ambiguity of the outer courts, the façade very clearly reflects the centre of the inner *zenana* court.

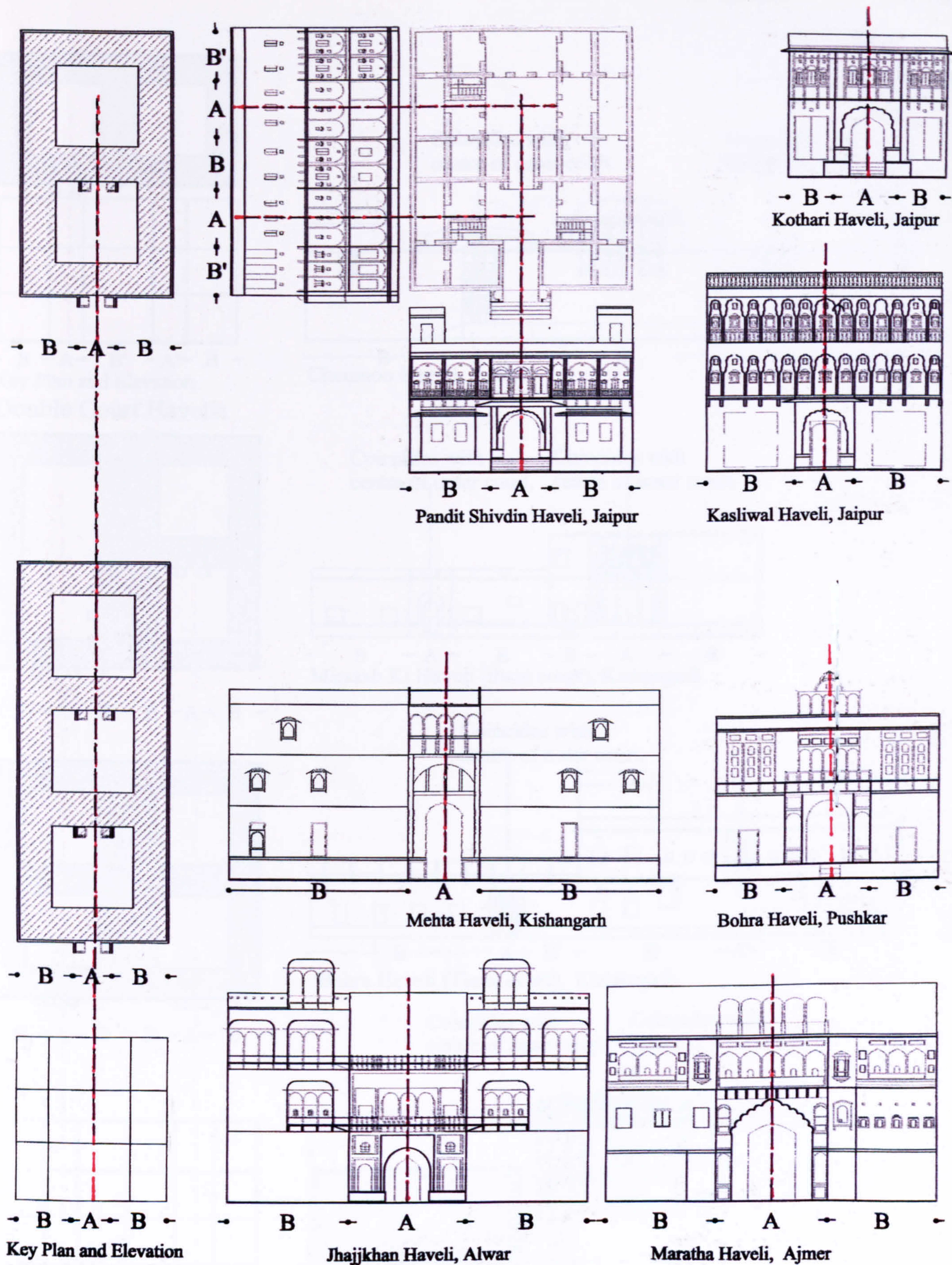




The centre of the Entrance coincides with the Court Centre in all cases

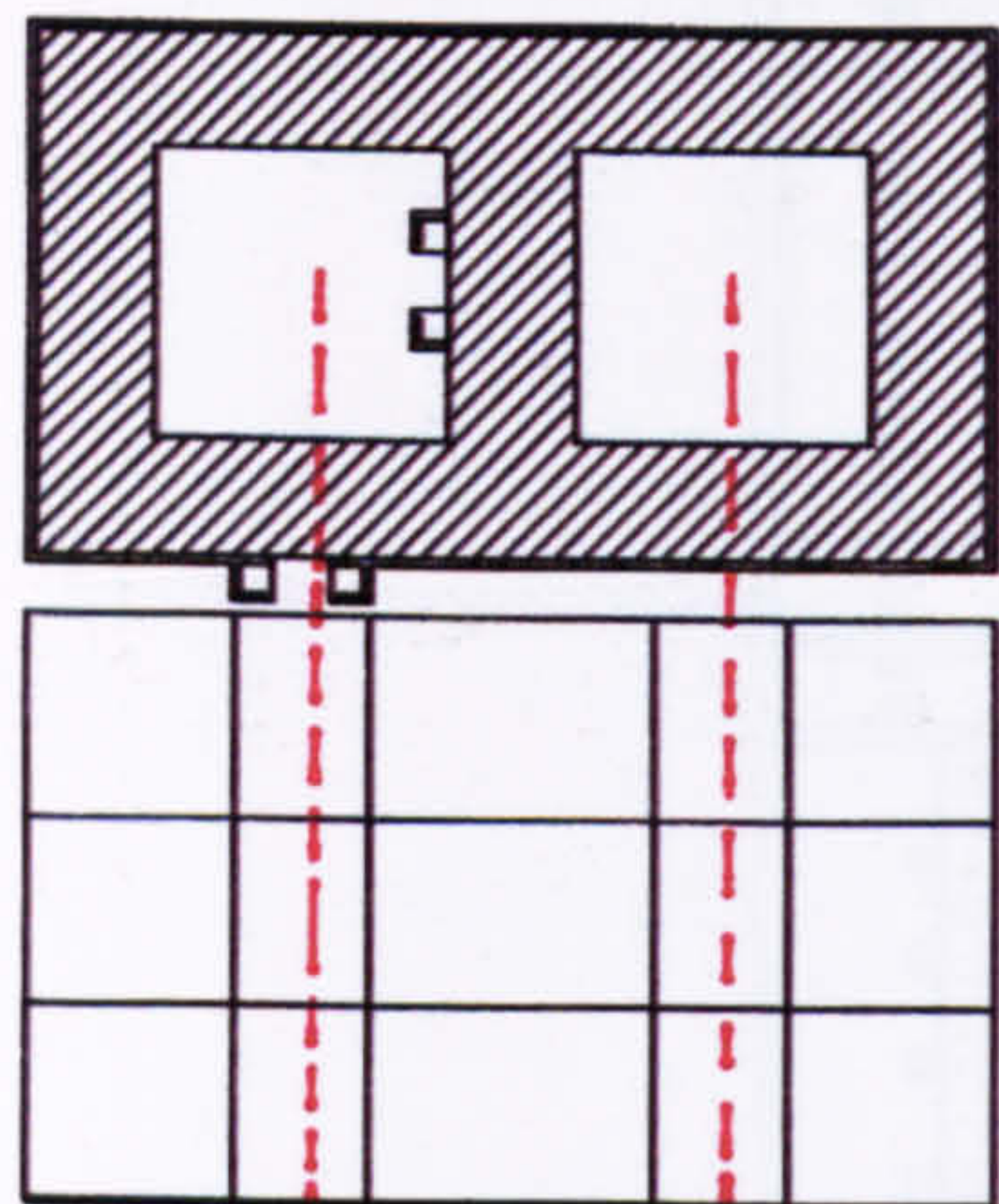
**Figure 5.4 - Facades of Single Court Havelis**





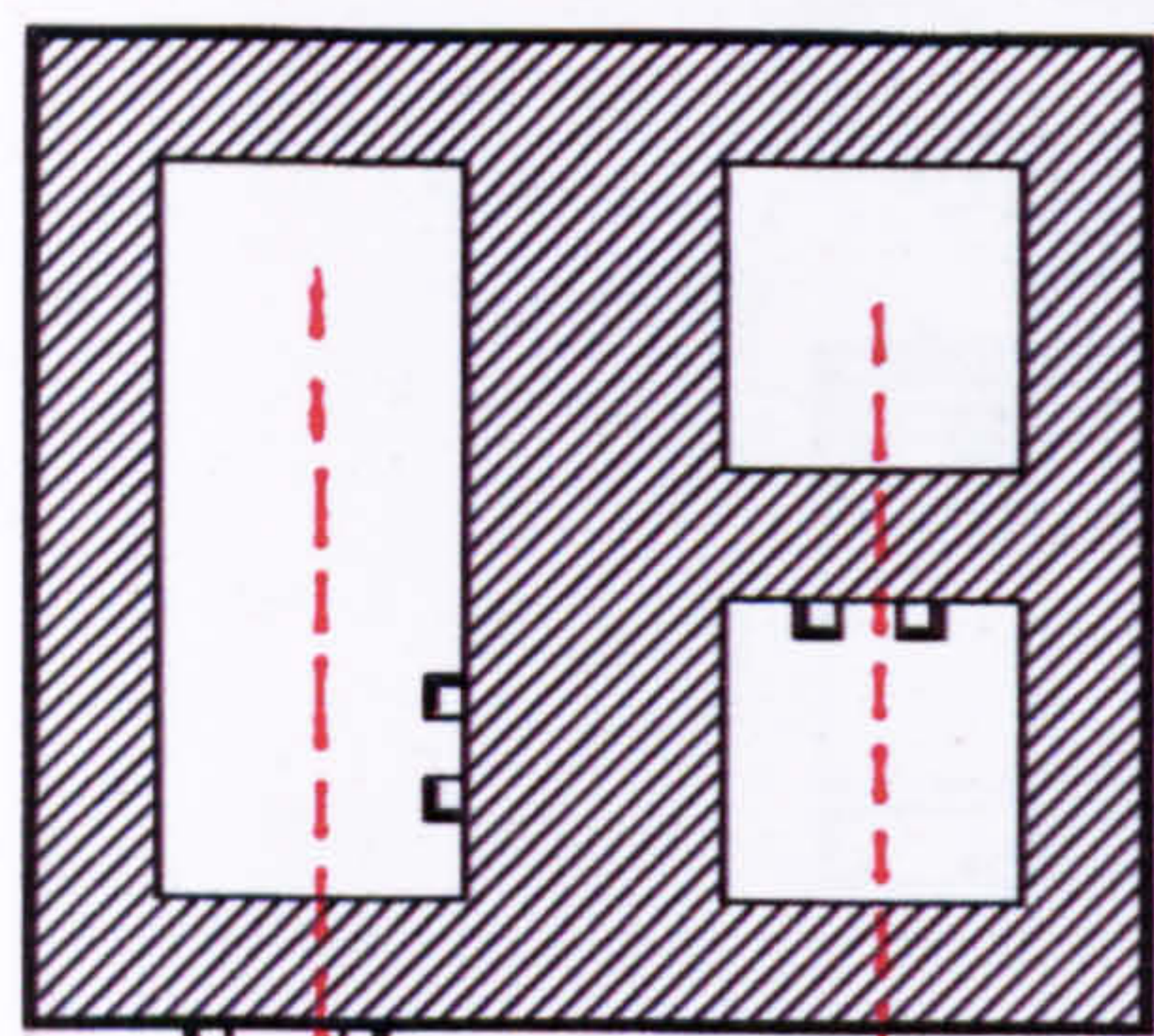
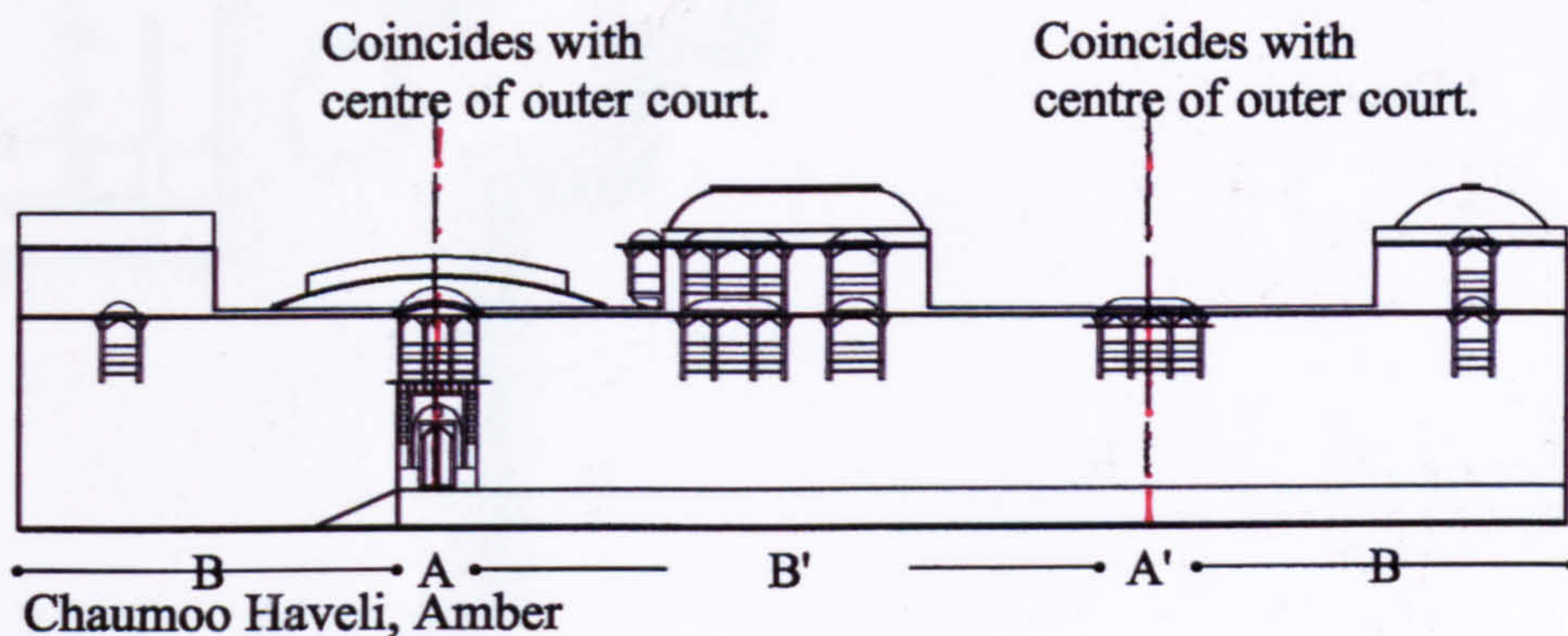
**Figure 5.5 - Facades of Double Court and Sequential Triple Court *Havelis***



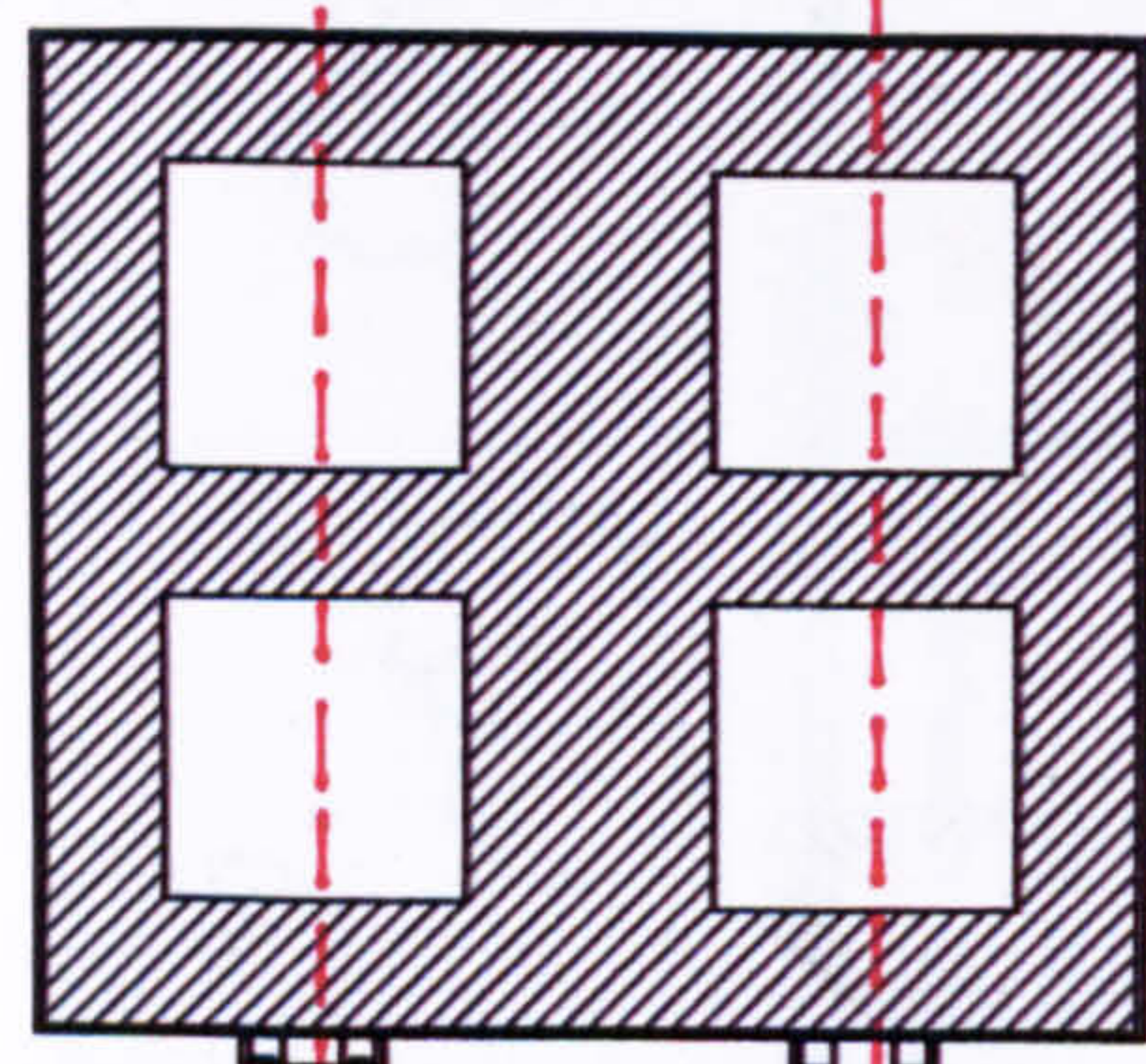
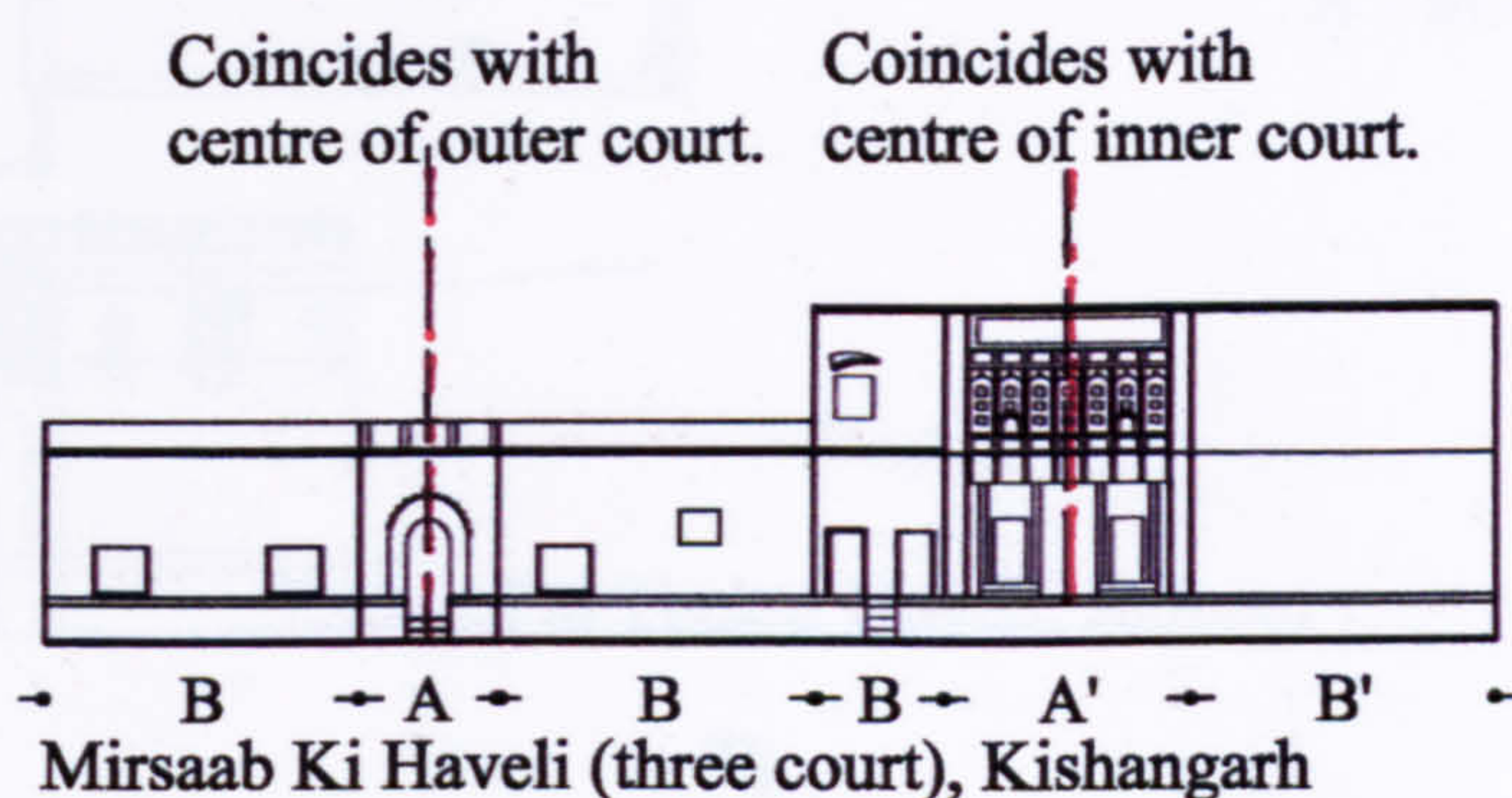


→ B → A → B' → A' → B →  
Key Plan and Elevation

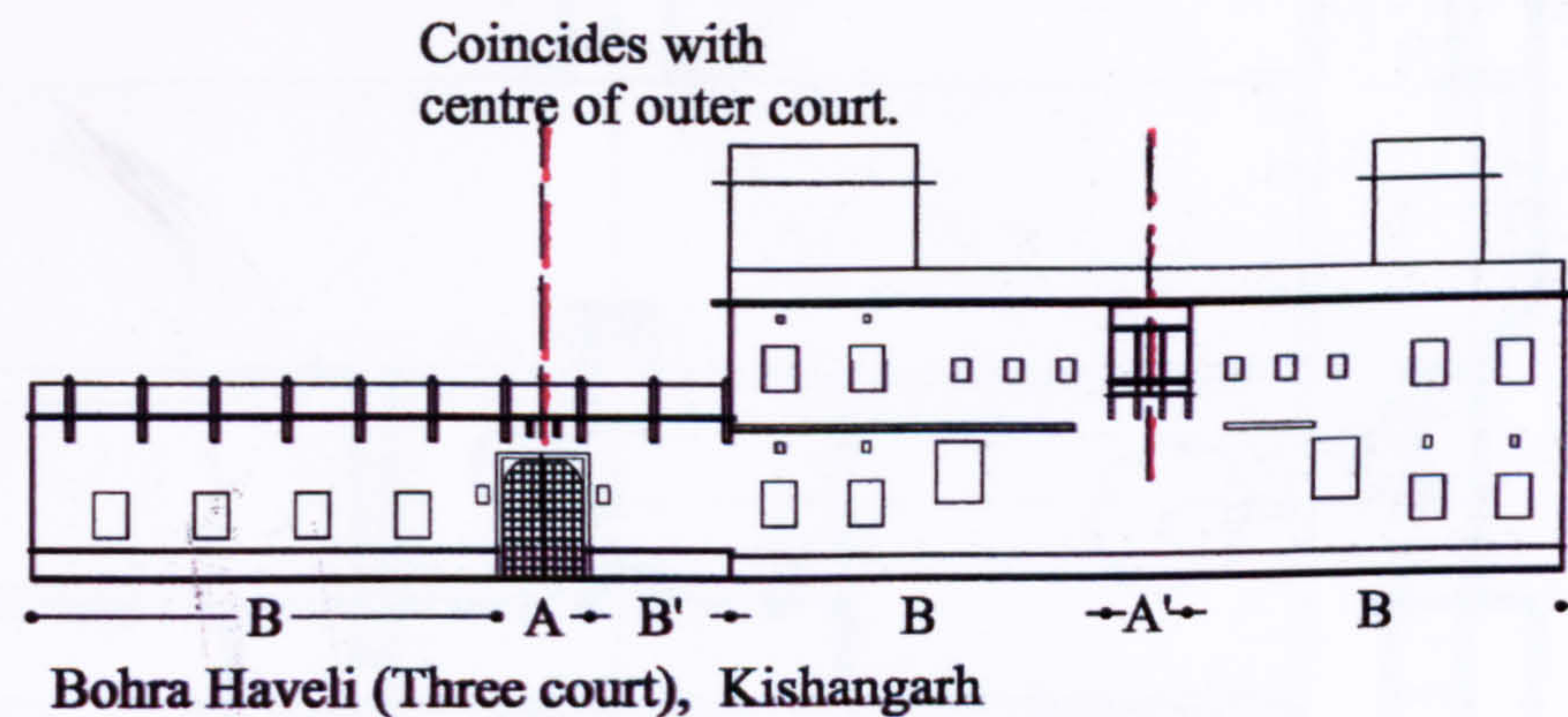
### Double Court Havelis



→ B → A → B → B → A → B →

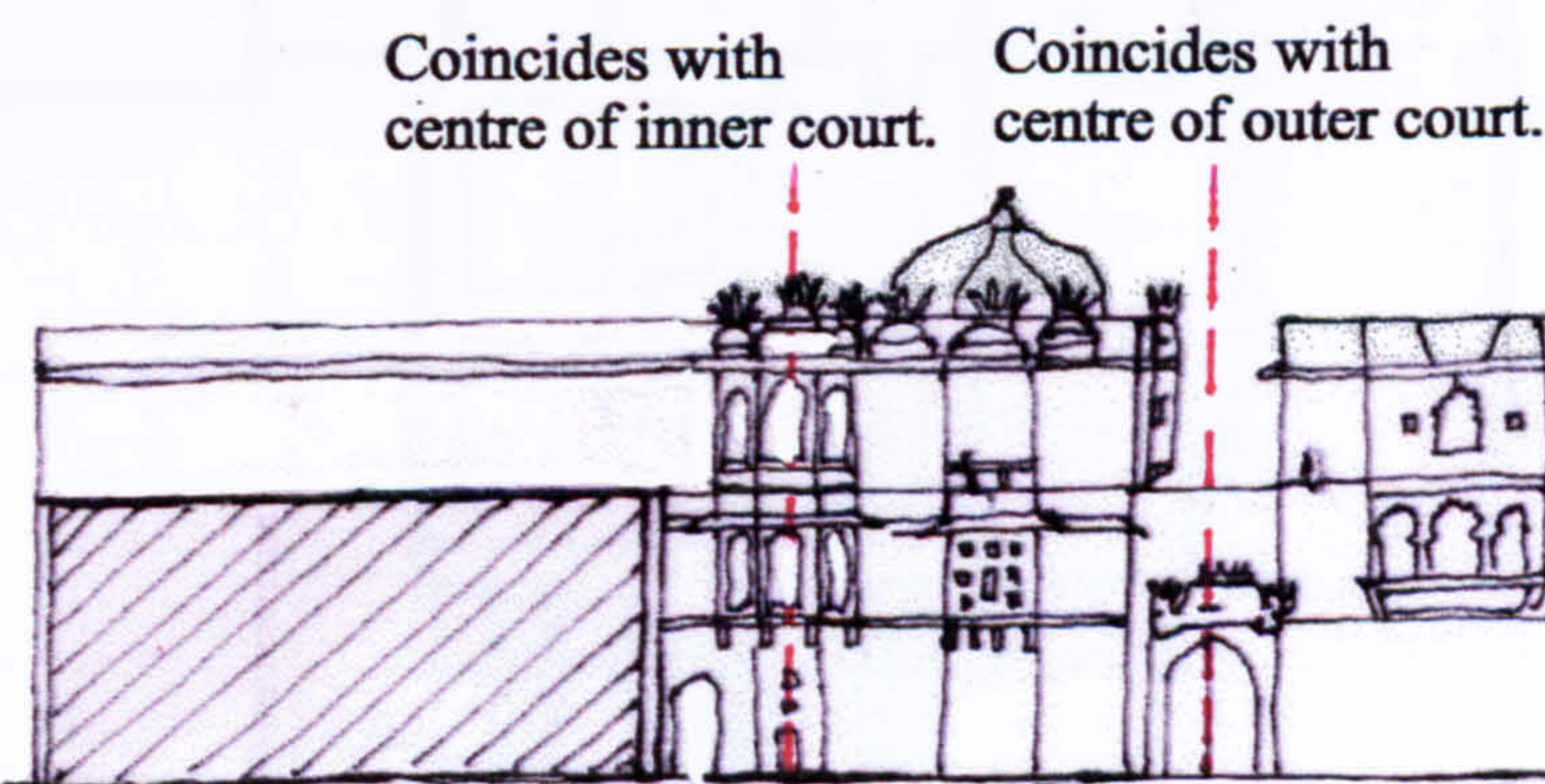


→ B → A → B → B → A → B →



→ B → A → B → B → A → B →

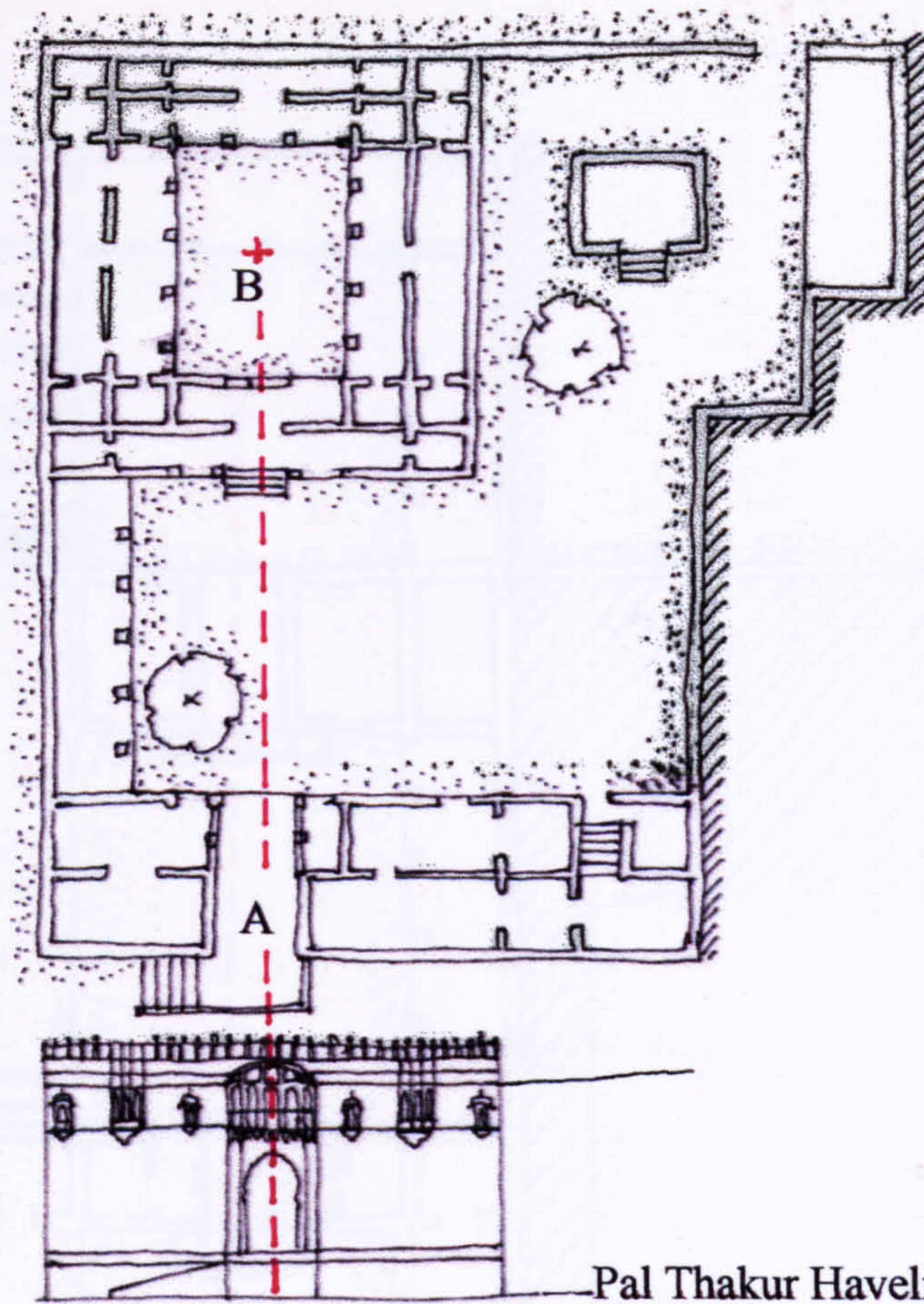
Key Plan and Elevation



### Double and Multi Court Havelis

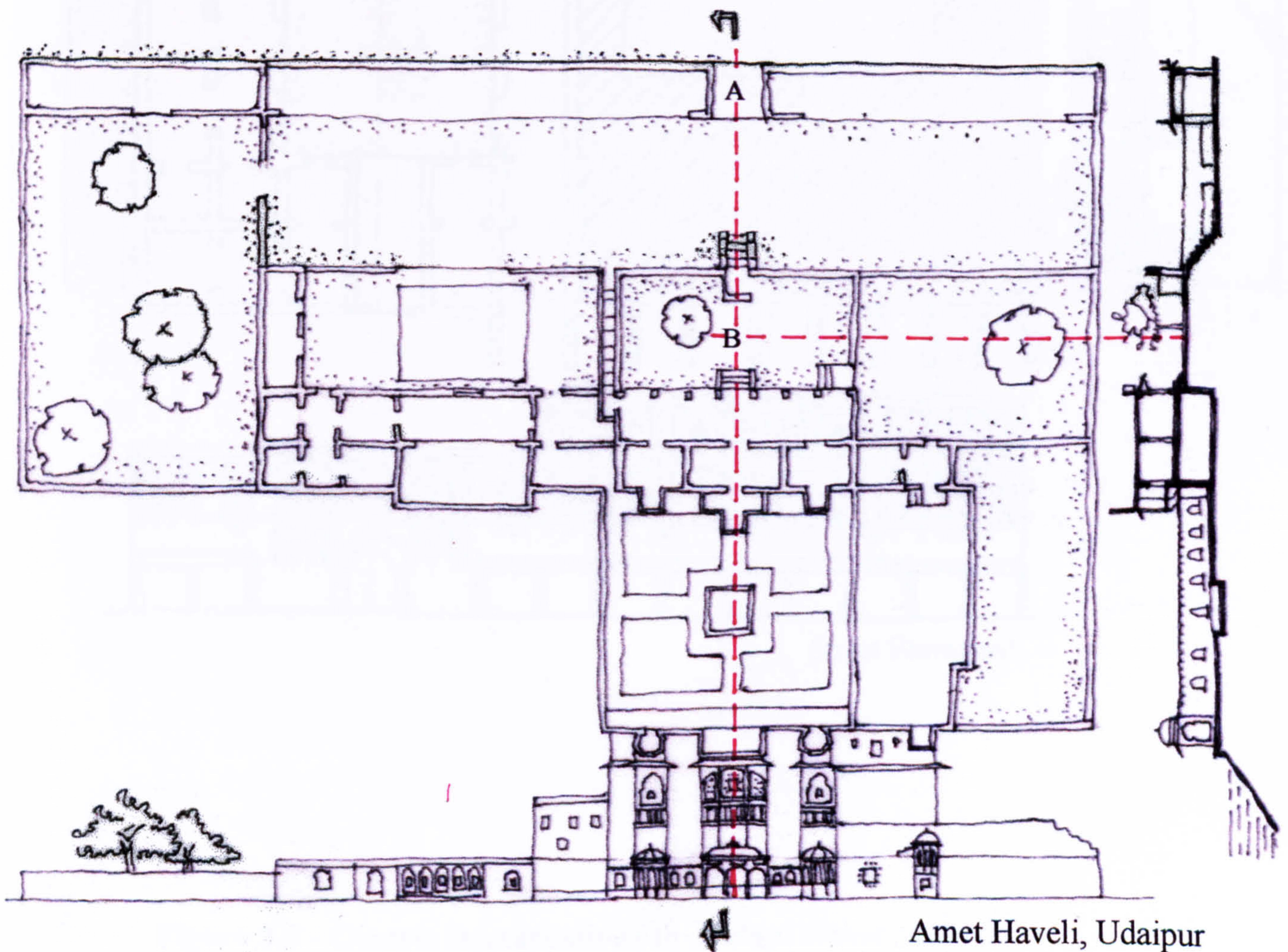
**Figure 5.6 - Facades of Double and Multiple Court Havelis**





A - Entrance  
B - Inner Court

Pal Thakur Haveli, Jodhpur



Amet Haveli, Udaipur

**Figure 5.7 - Centric Demarcations in Multi Court *Haveli* Facades**



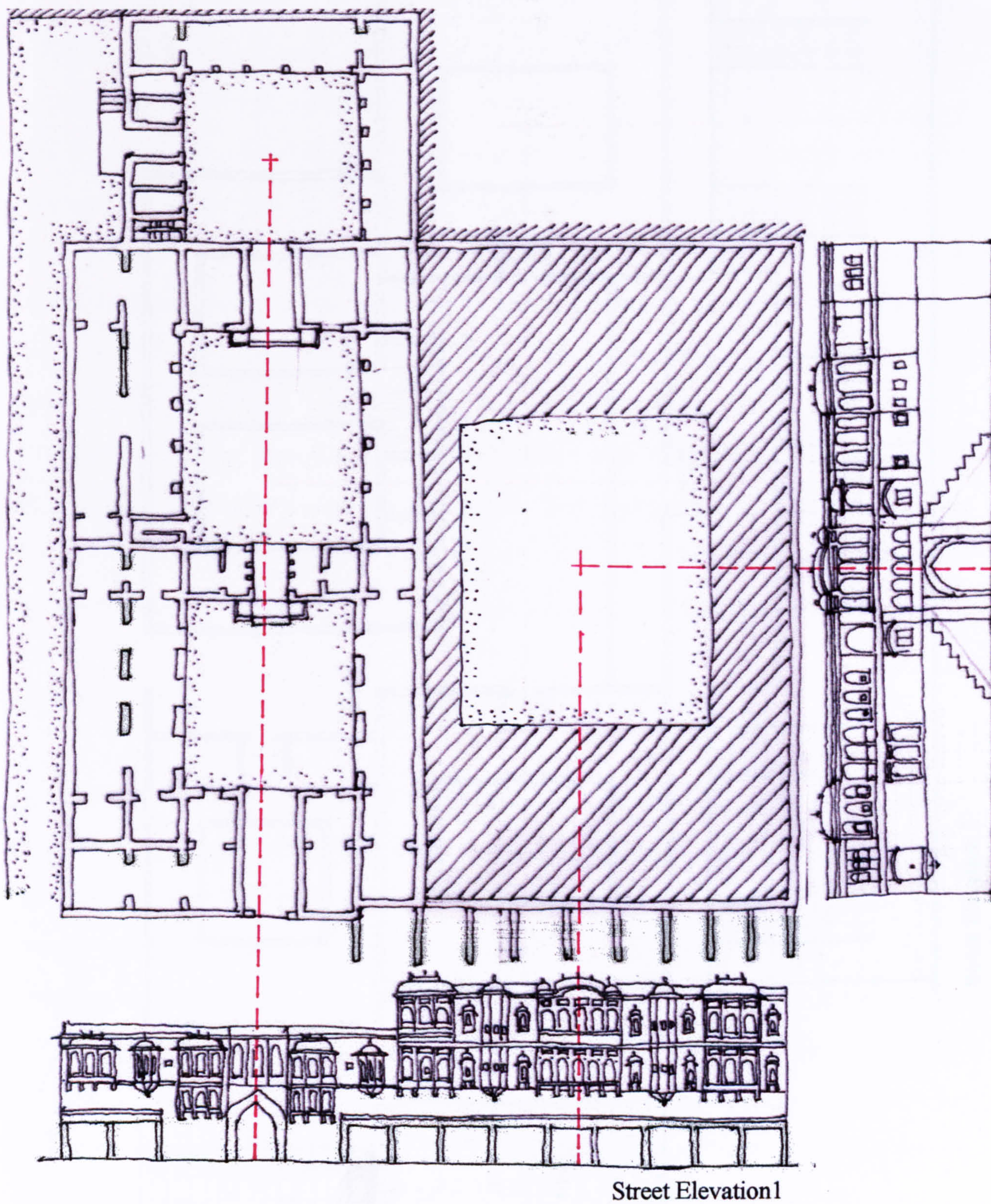
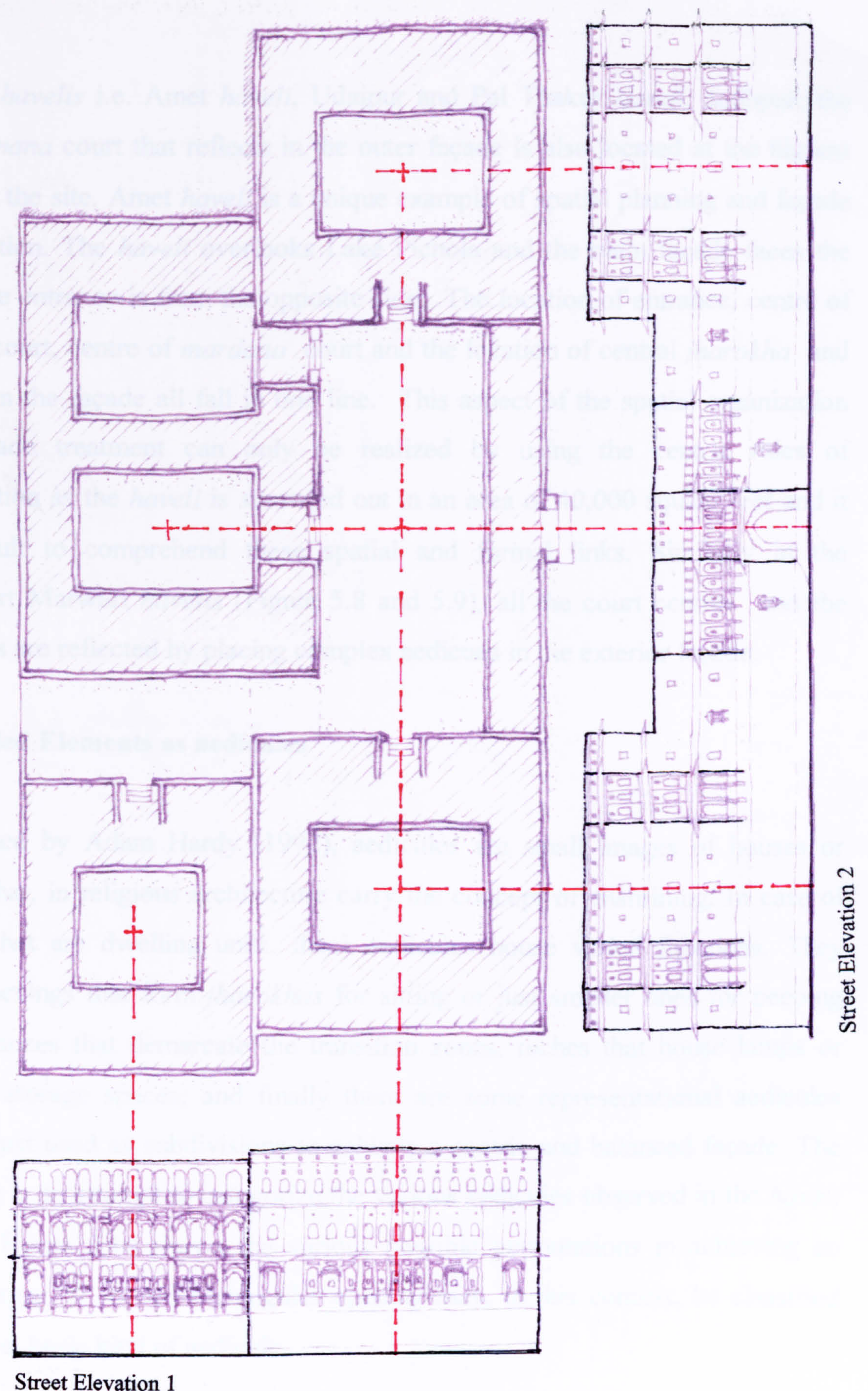


Figure 5.8 - Centric Demarcations in Natani *Haveli*, Jaipur





Street Elevation 1

**Figure 5.9 - Central Aedicules in Facades of Patwa *Haveli*, Ajmer correspond to the Court Centres in the Multi Court Plan.**



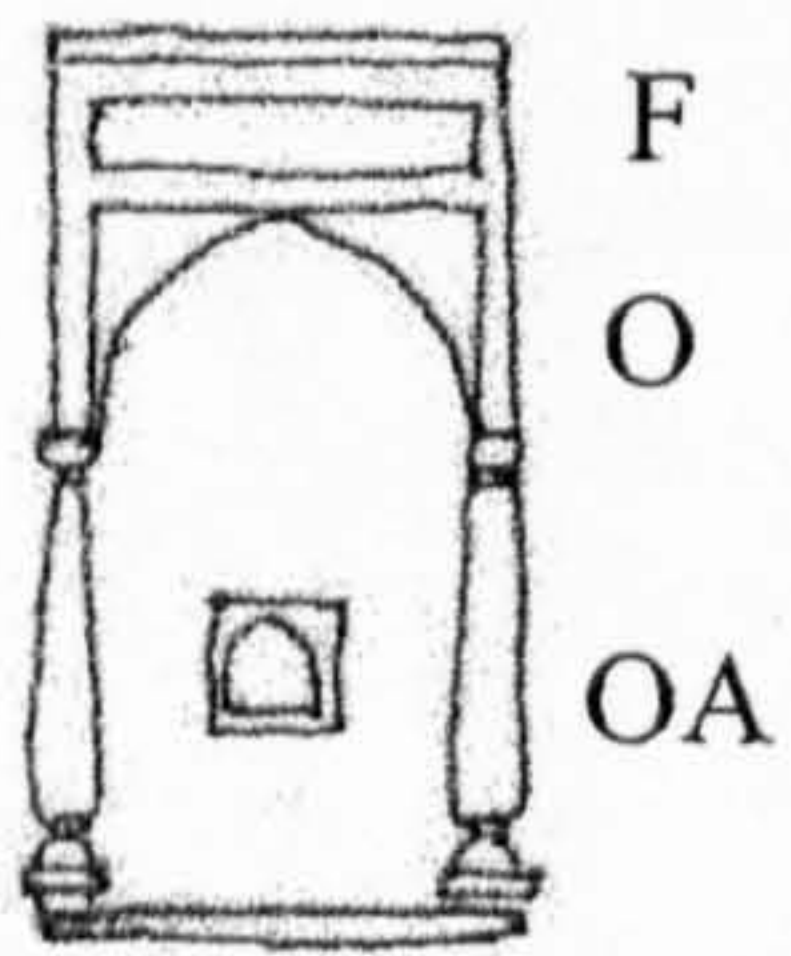
In both *havelis* i.e. *Amet haveli*, Udaipur and *Pal Thakur haveli*, Jodhpur, the inner *zenana* court that reflects in the outer façade is also located at the highest point on the site. *Amet haveli* is a unique example of spatial planning and façade composition. The *haveli* overlooks Lake Pichola and the main façade faces the lake. The entrance is from the opposite side. The location of entrance, centre of *zenana* court, centre of *mardana* court and the location of central *jharokha* and *chattris* in the façade all fall in one line. This aspect of the spatial organization and façade treatment can only be realized by using the centric rules of composition as the *haveli* is sprawled out in an area of 40,000 square feet and it is difficult to comprehend these spatial and formal links. Similarly in the multicourt Marwari *havelis* (Figure 5.8 and 5.9), all the court centres and the entrances are reflected by placing complex aedicules in the exterior façade.

### **Assembled Elements as aedicules**

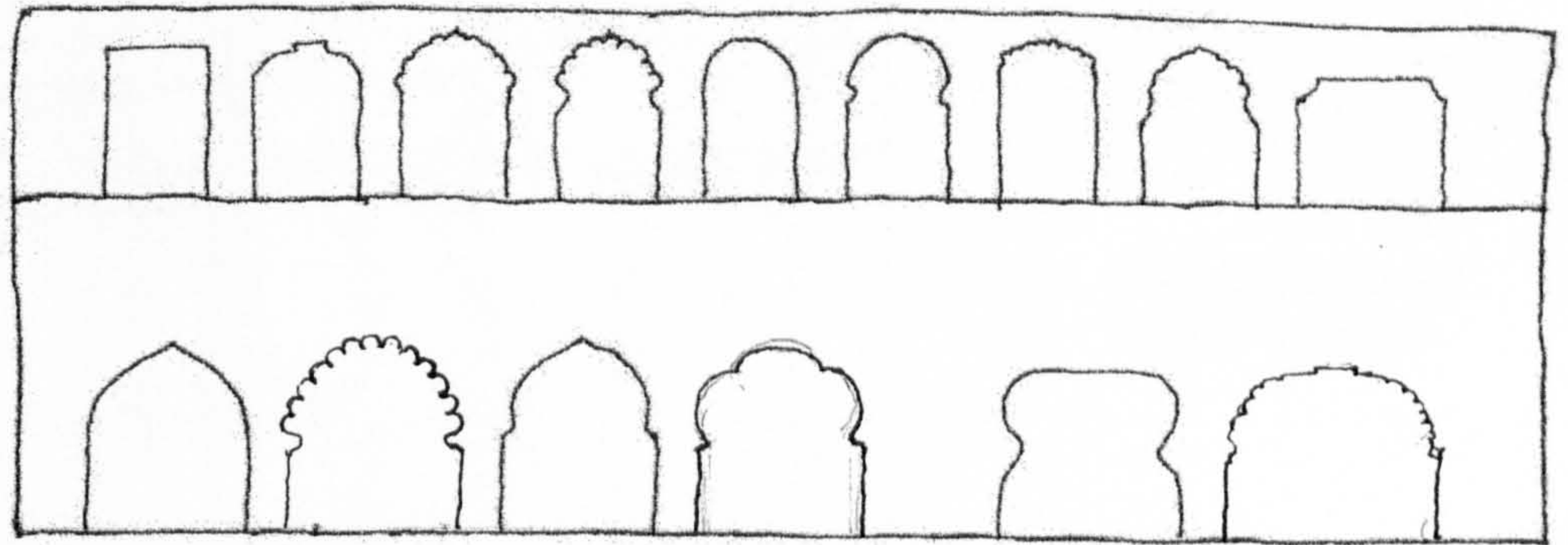
As defined by Adam Hardy (1992), aedicules are small images of houses or shrines that, in religious architecture carry the concept of enshrining. In case of *havelis* that are dwelling units, these aedicules house varied functions. They frame openings that form *jharokhas* for sitting or just smaller ones for peeping out, entrances that demarcate the transition zones, niches that house lamps or serve as storage spaces; and finally there are some representational aedicules that are just used as subdivisions to achieve a centric and balanced façade. The following is an attempt to categorize the various aedicules observed in the *haveli* façades. Figure 5.10 shows the various possible permutations in achieving an aedicule type. A framed rectangular opening may, in this context, be classified as the most basic kind of aedicule.



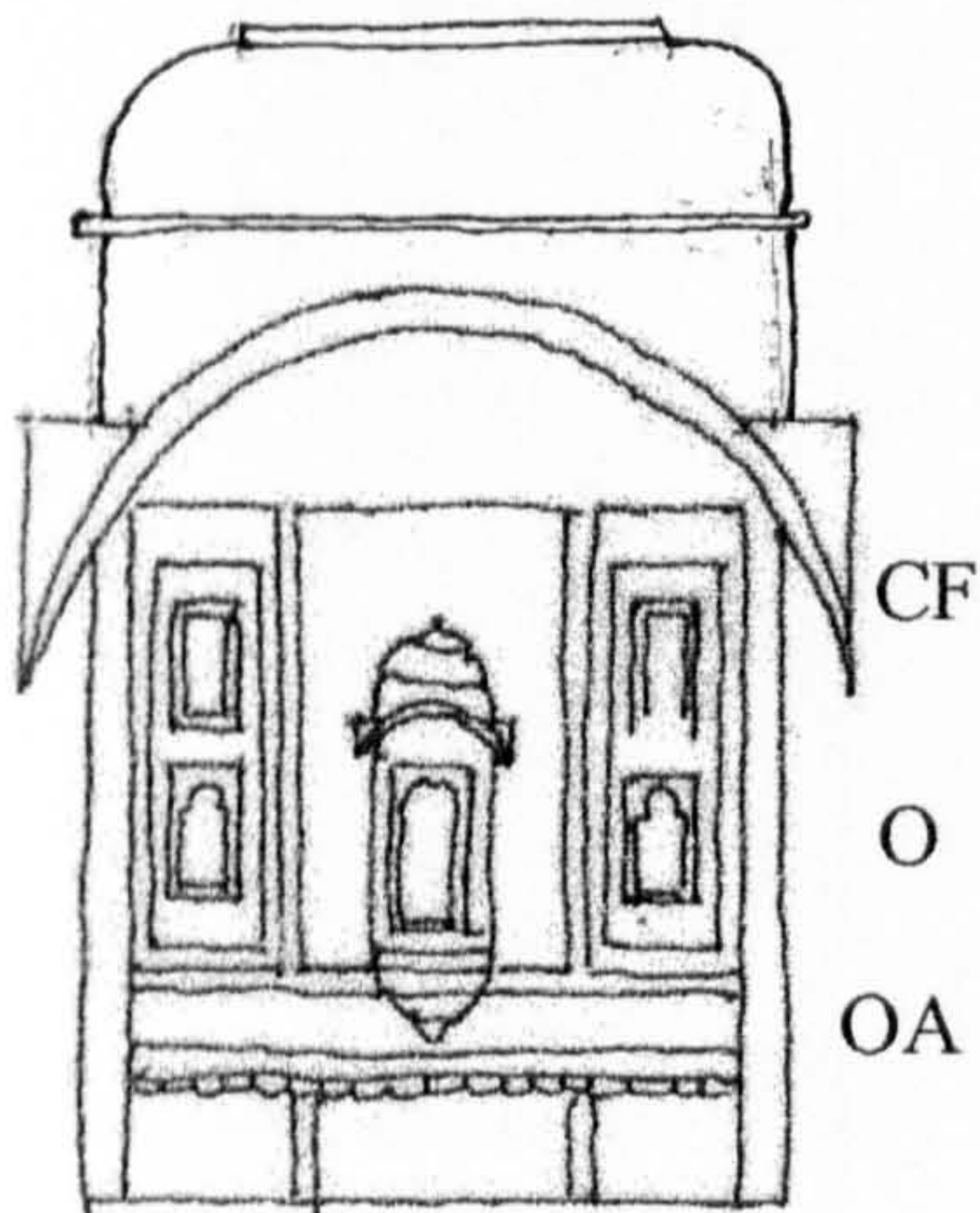
# 'O' - Opening Types



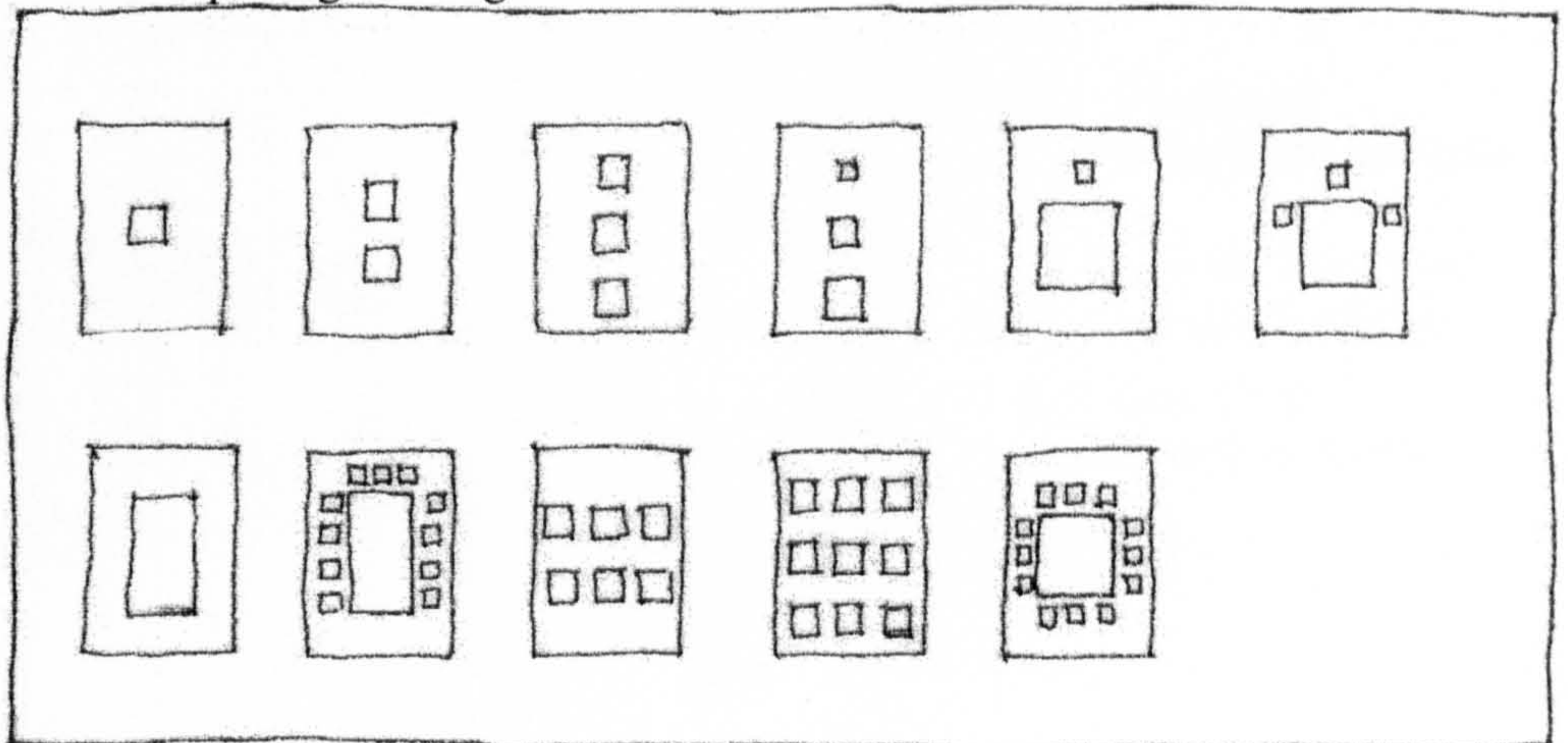
Simple aedicule with single frame



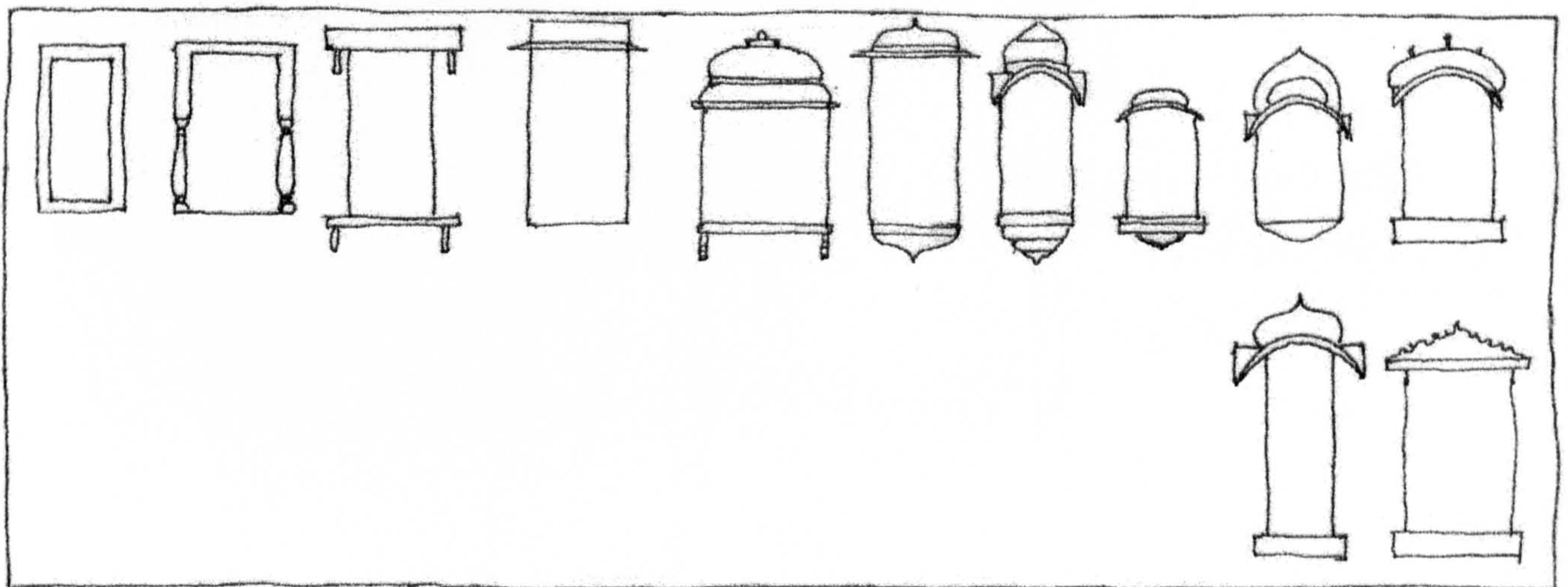
# 'OA' - Opening Arrangements



Composite aedicule



# 'F' - Frame Types for Simple aedicules



# 'CF' - Frame types for composite aedicules

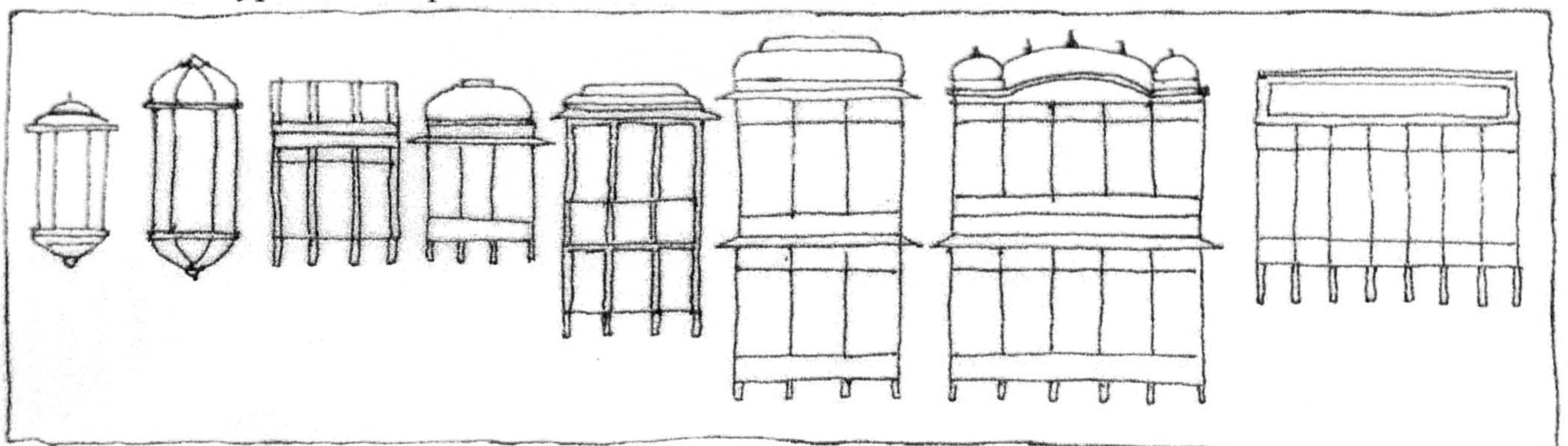


Figure 5.10 - Composition of Aedicules



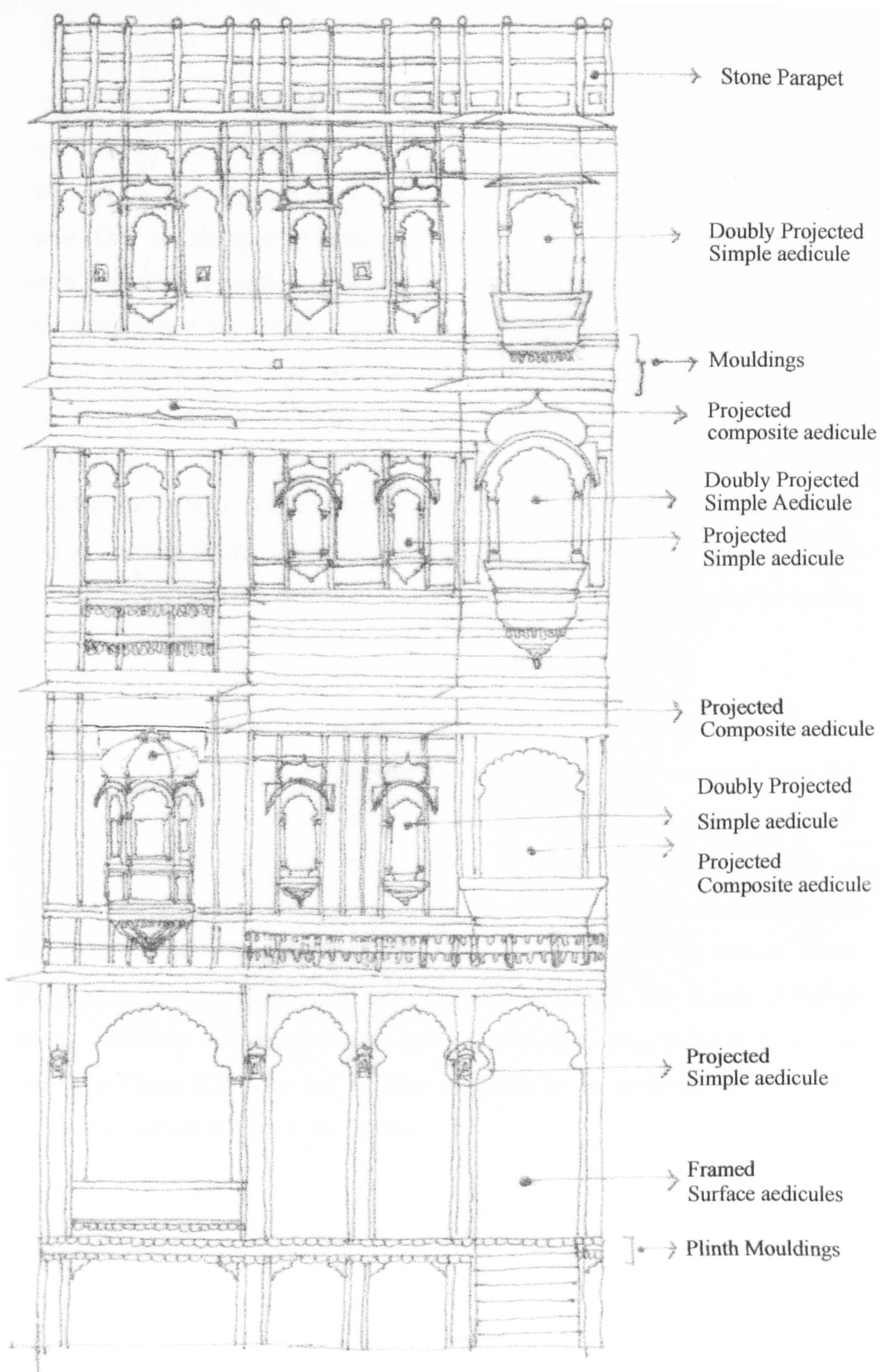


Figure 5.11 - Aediular Composition of Patwa *Haveli* Facade, Jaisalmer



Figure 5.10 also shows the various styles of opening 'O' (arch type or trabeated), the arrangements of the small windows (*bari*) inside the aedicular frame 'OA' and the type of framing 'F' (rectangular or *chatri* types). The curved forms are called '*chatris*' probably of royal origin to demarcate centre. The ones with square base are called '*chautar*' in the local language. The Bengal roof is termed as '*bangaldar*' and the domical type is called '*tablidar*'<sup>3</sup>. Umbrellas or *chatris* are often used a symbol of royalty. The form has a symbolic significance of centering - to focus on the secular or sacred sources of power. The centre as a reference point is present in all aspects of an aedicule whether it is the style of opening, arrangements of opening or the frame itself. Each aedicule is centric and symmetric and its placement in the façade demarcates a corresponding centre in the façade and the plan form.

In case of the Rajasthan *havelis*, the aedicules are present in the façade in three forms - on the wall surface (as an opening or just painted), projected from the wall (on brackets) and projected through another (projected) aedicule. In terms of composition they can be categorized as a) simple aedicules that house an opening in a single frame or b) composite aedicules that have multiple frames (often 3 or 5 in number) as shown in Figure 5.10. It shows the various frame types found in simple aedicules and composite aedicules. The façade of Patwa *haveli*, Jaisalmer that represents the peak of aedicular composition in *havelis* is shown in Figure 5.11. The sub regional variations in the aedicules are discussed in the next section (Figure 5.16 – 5.24).

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<sup>3</sup> Found in an interview with a Jaipur mason.



## The Elements

Besides the aedicules, a variety of structural elements such as brackets and columns and decorative ones like mouldings, parapets and jails etc. are used in the *haveli* façades.

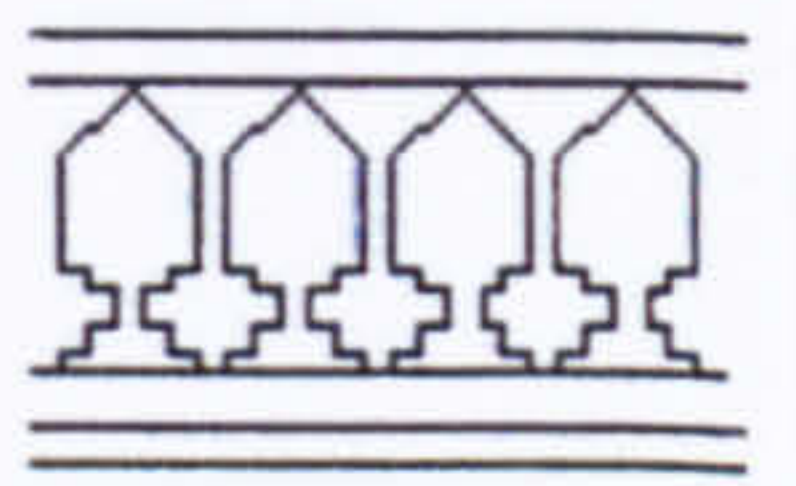
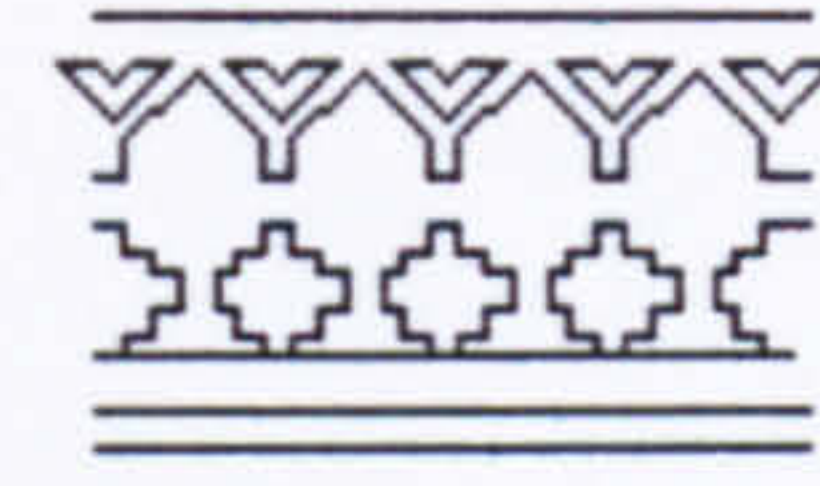
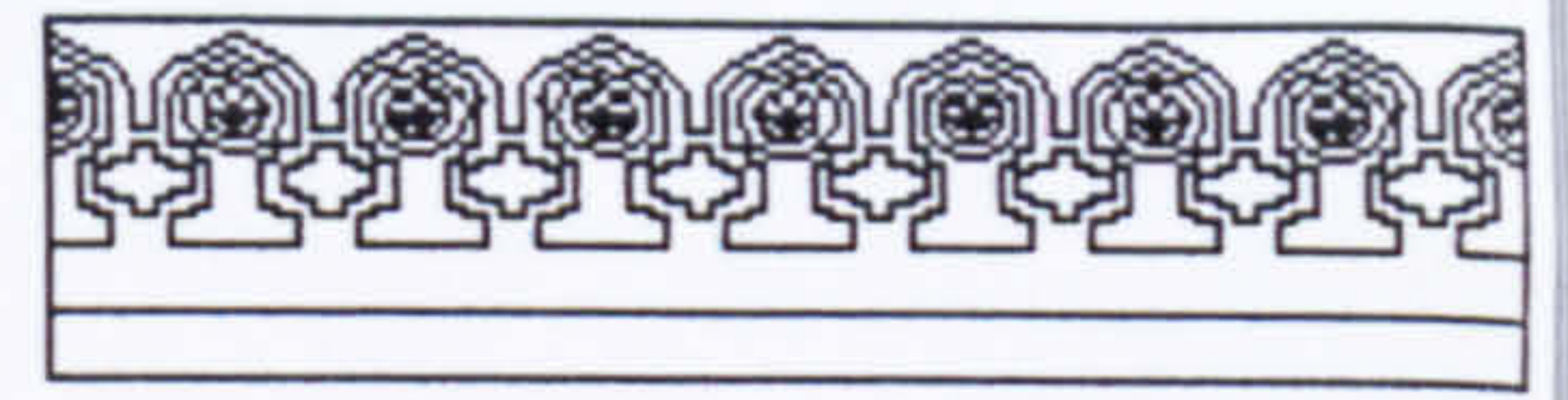
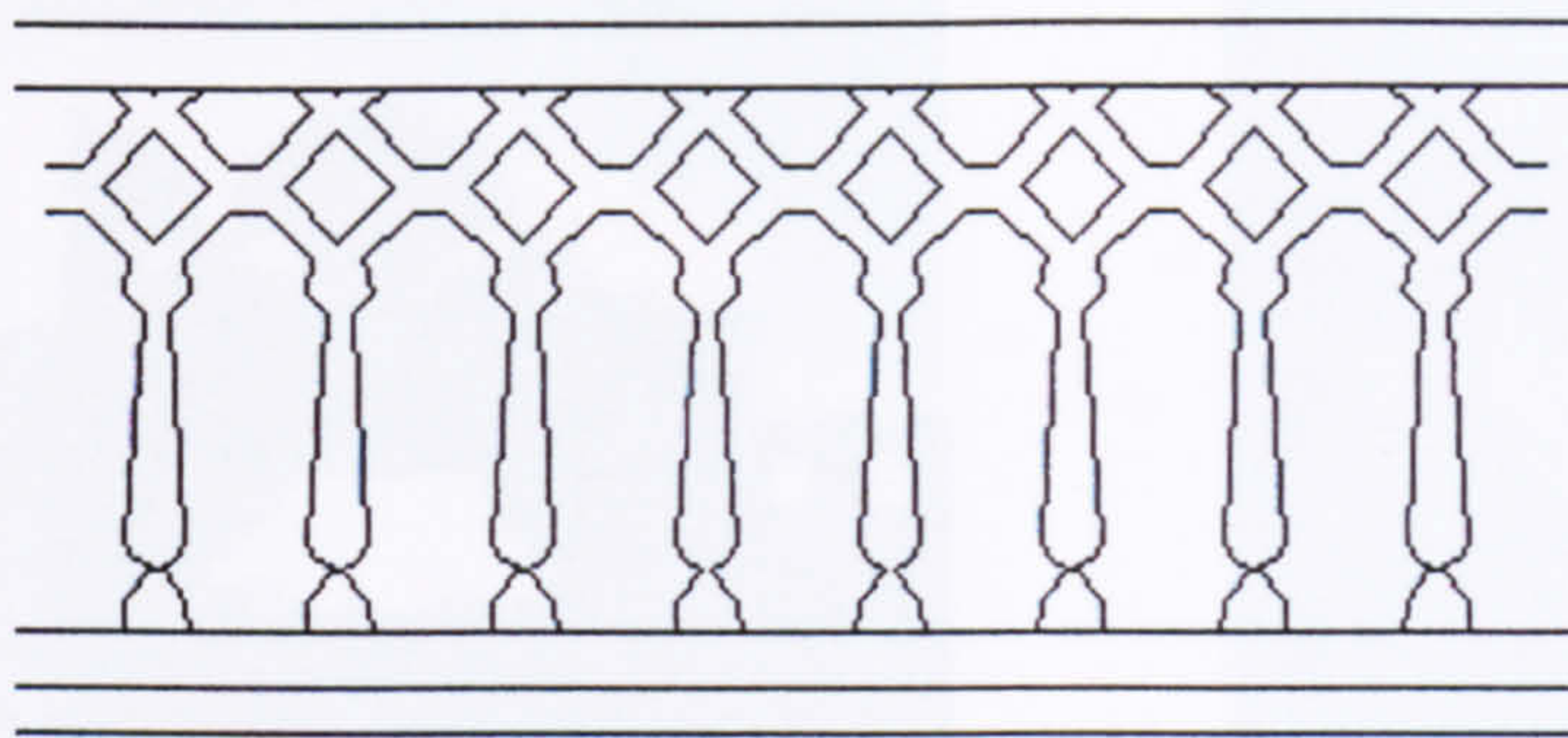
a) Elements of horizontal demarcation - 'Mouldings are conceived as a piled up, rhythmic sequence of characteristic entities, each with its own representational origins (a *kapota* cornice as a thatched eaves etc.) its own evolutionary history and associative overtones.'<sup>4</sup> The most frequently observed plinth-moulding pattern is the lotus petals found all over Rajasthan. Figure 5.12a and Figure 5.12b show mouldings and parapets in different regions of Rajasthan. These mouldings are often observed on the plinth, base of door, window, and niche or on steps. A few more complex stone carvings are observed in the towns of Jaisalmer and Pokhran. Stone parapets in the *havelis* also show a rich variety in design - from simple stone panels fixed in pillars to high walls with arched openings. Slight sub regional variations are observed in the parapets also. In Dundhar and Hadoti region, the parapet motifs are more like Rajput fortress walls. *Havelis* of Shekhwati region have either low walls with stone panels or higher parapet walls with arched openings and parapets in Jaisalmer *havelis* show intricate stone carving in panels. The overhangs or *chajjas* are basically of two kinds, a straight stone slab and a curved *bangaldar* one.

Figure 5.13a and Figure 5.13 b show brackets from different regions of Rajasthan. Brackets are essential structural elements in these *havelis*, and they are incorporated in the composition of the façades in an innovative manner.

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<sup>4</sup> Hardy, Adam. *A+D* Nov.-Dec.1997 p.75

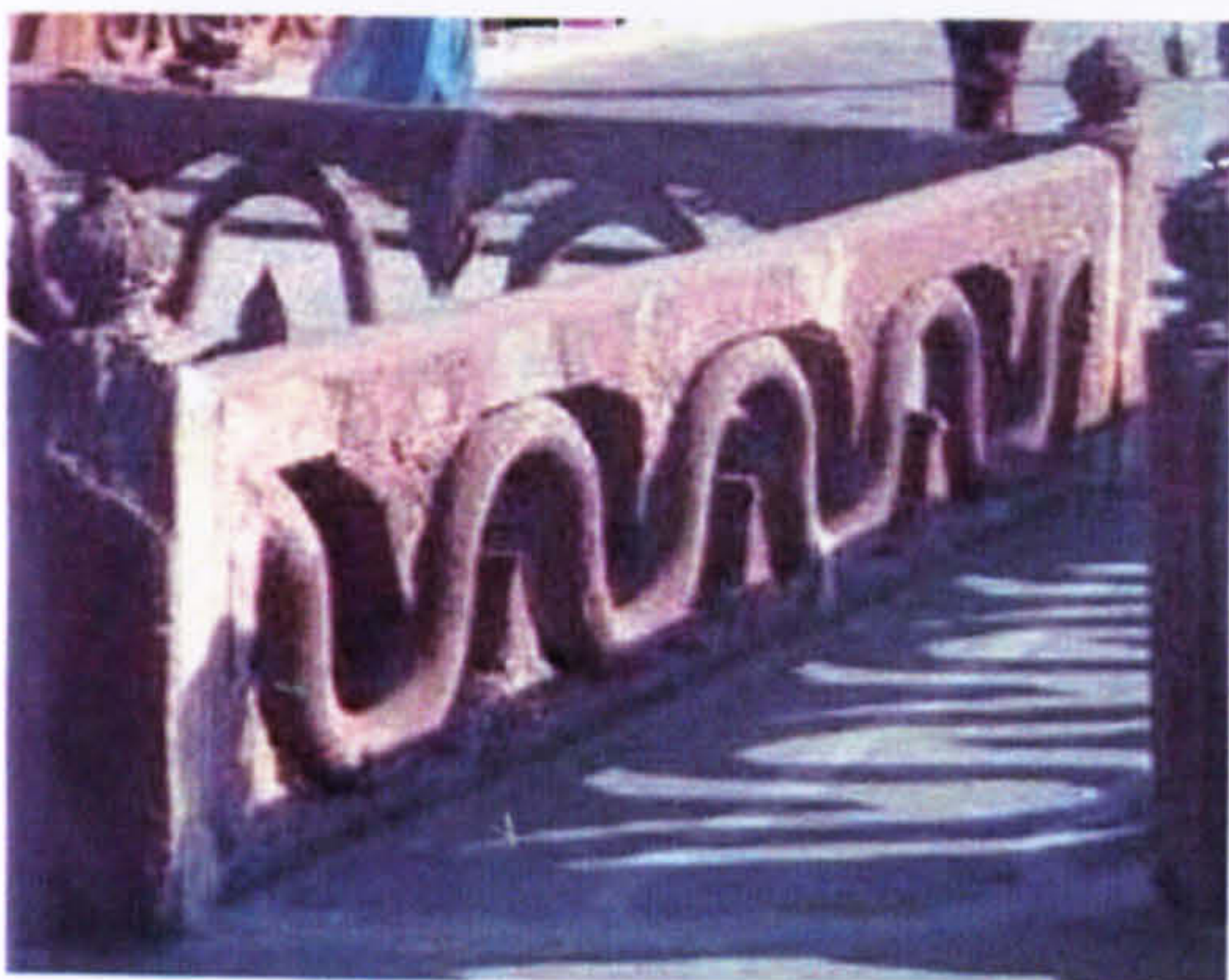




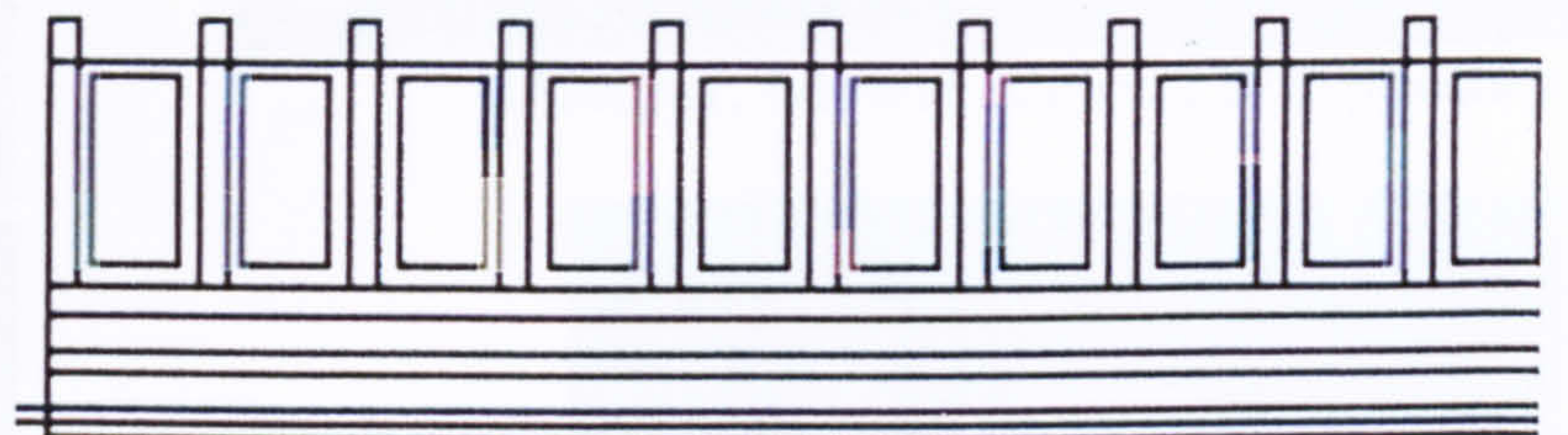
Parapet patterns in Dundhar region and Hadoti region (17th - 19th century)



Mewar region (17th century)



Jodhpur, Marwar region, (19th century)



Jaisalmer, Marwar region (19th century)



Jaisalmer and Pokhran, Marwar region (19th century)

**Figure 5.12a - Parapets and Mouldings**

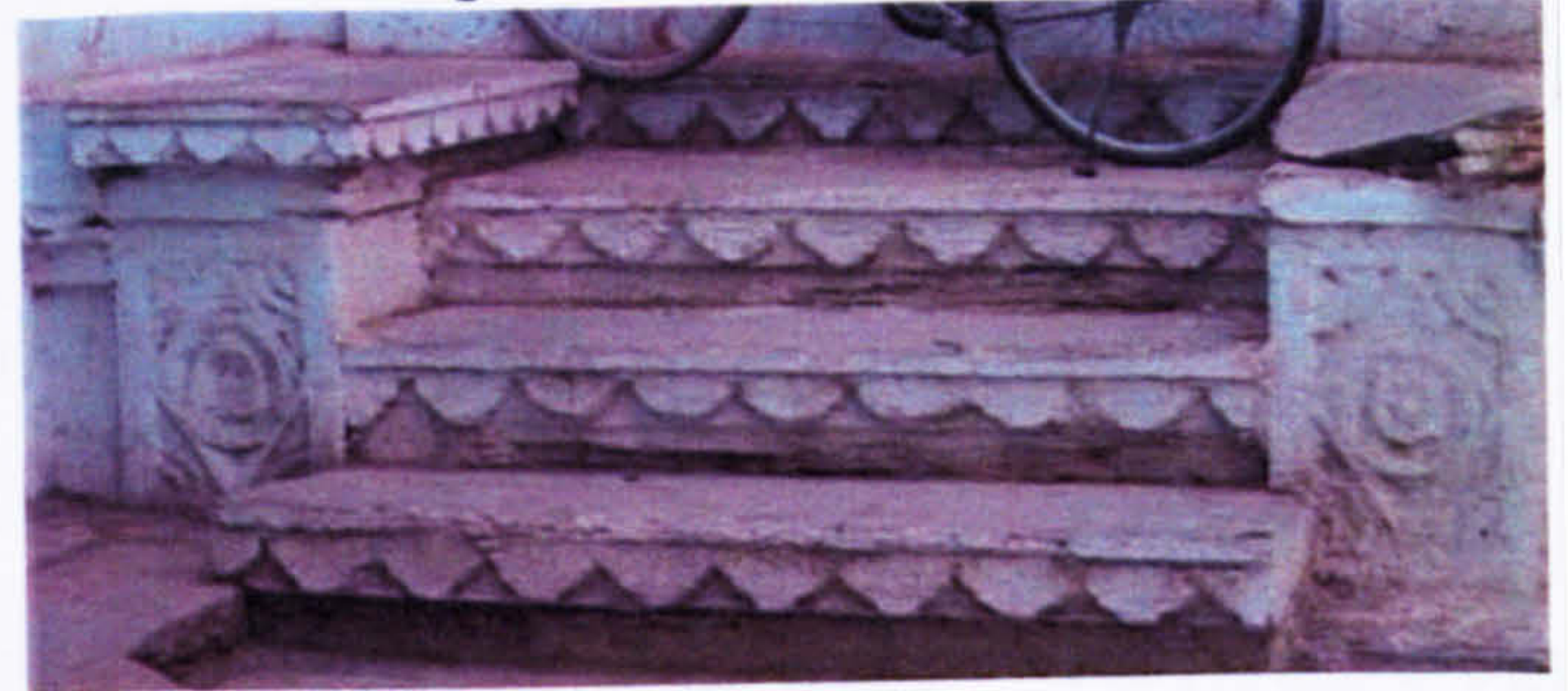




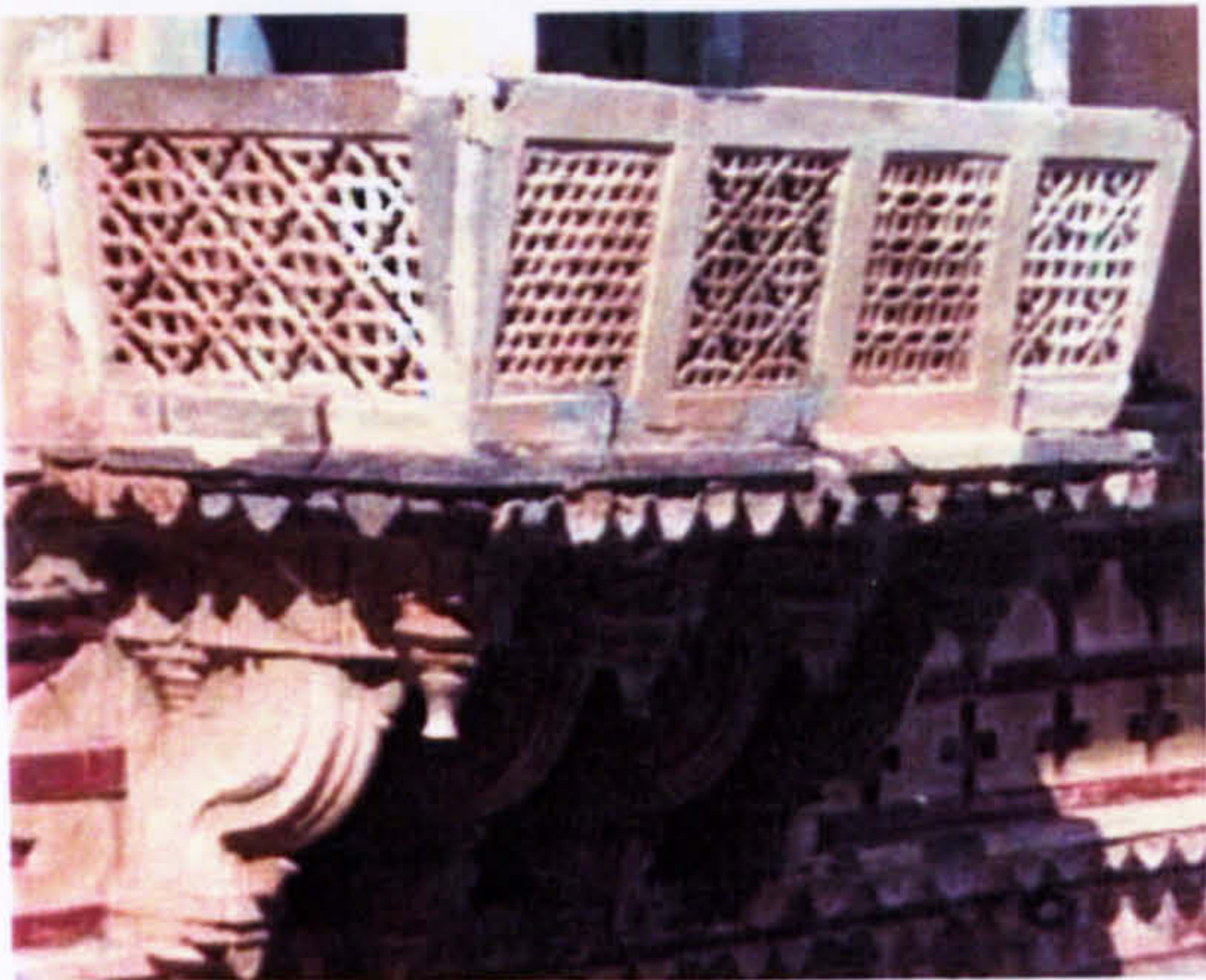
Udaipur, Mewar region (17th century)



Udaipur, Mewar region, (17th century)



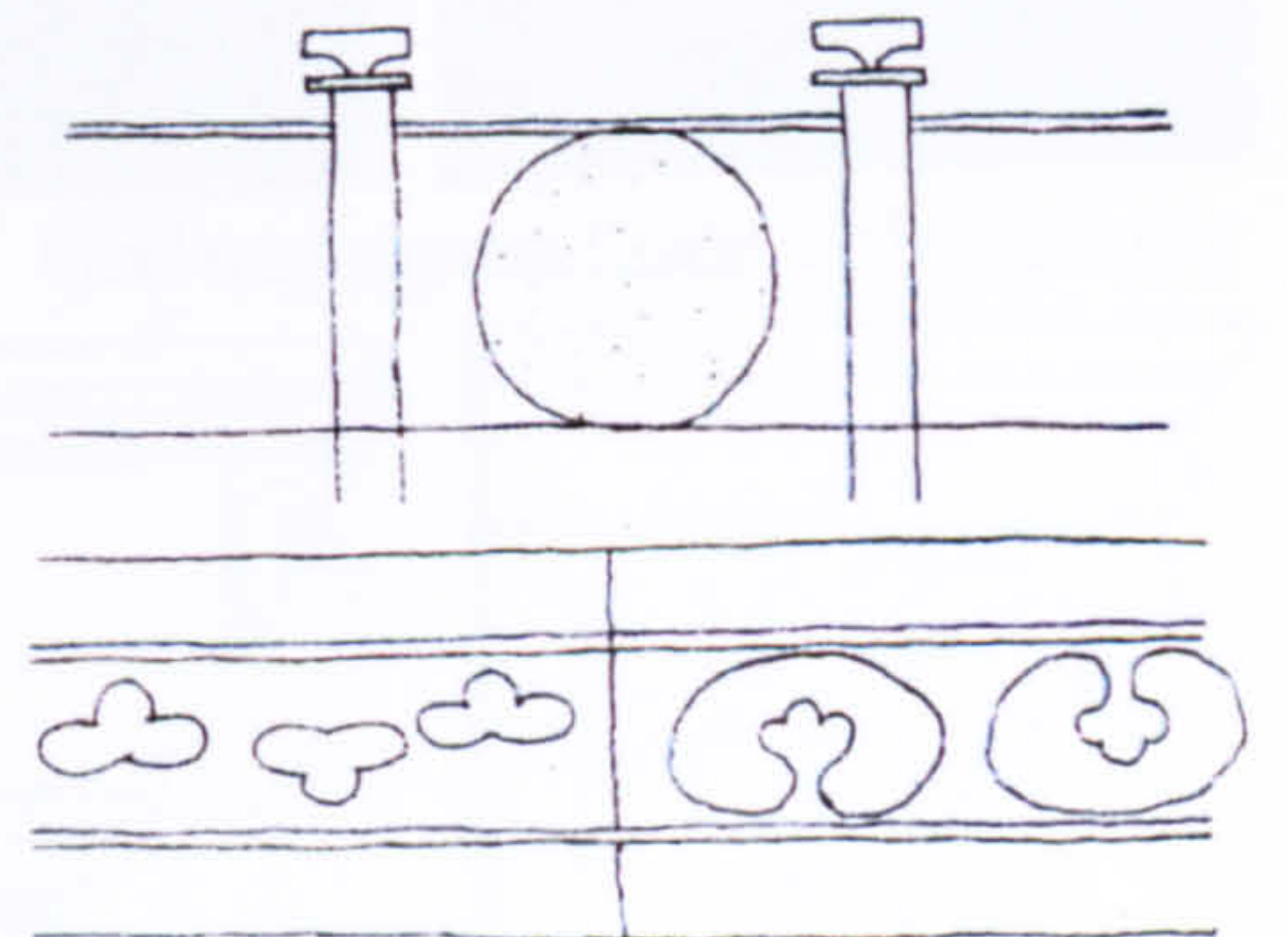
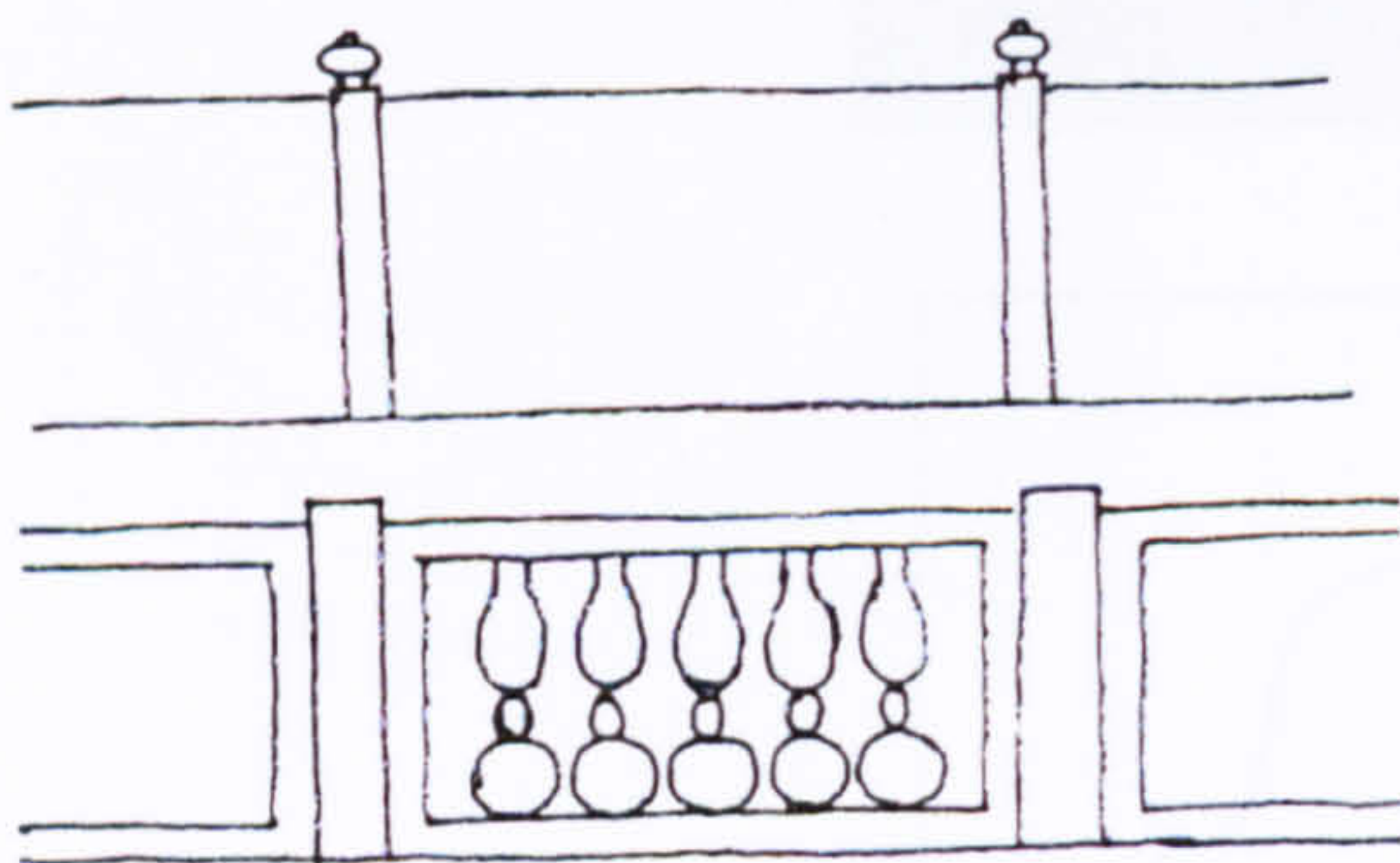
Udaipur, Mewar region (17th century)



Udaipur, Mewar region (18th century)



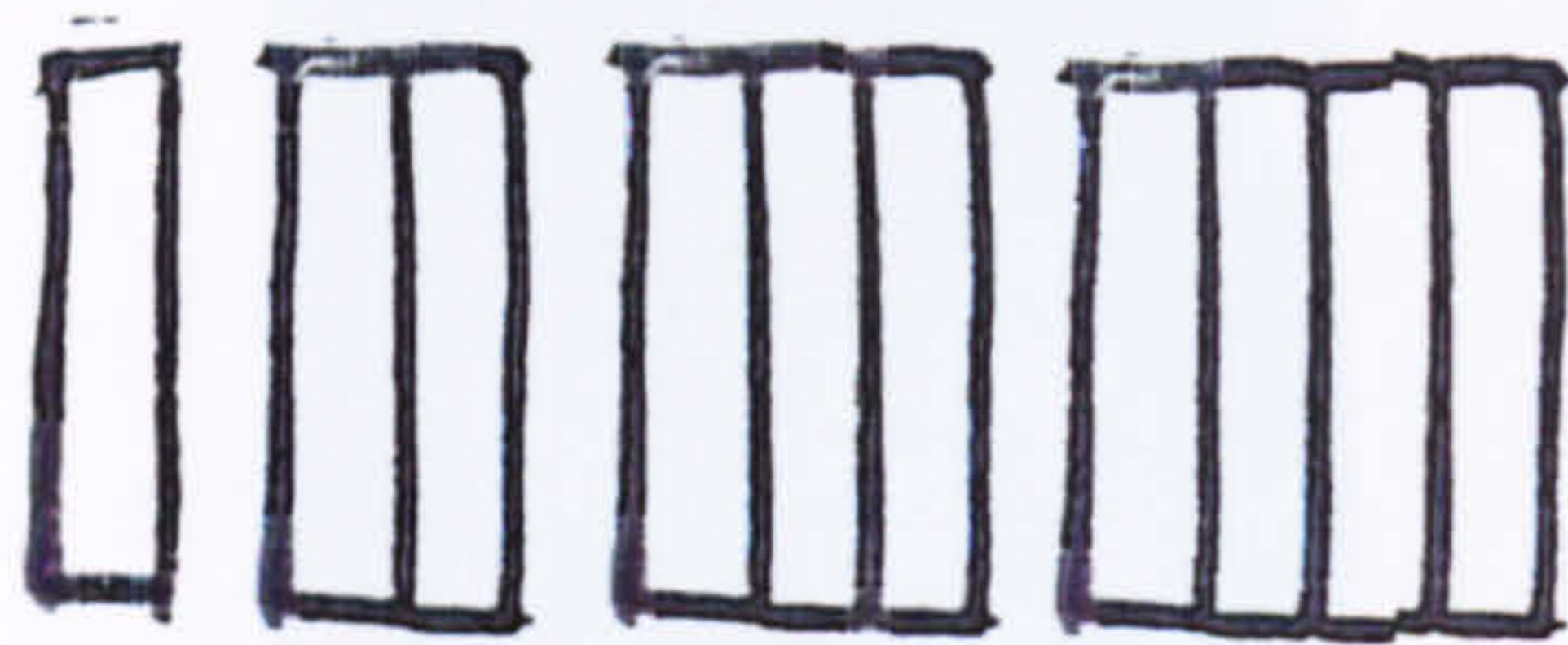
Nimbahera, Mewar region (19th century)



Stone parapets, Shekhawati region (19th century)

**Figure 5.12b - Parapets and Mouldings**

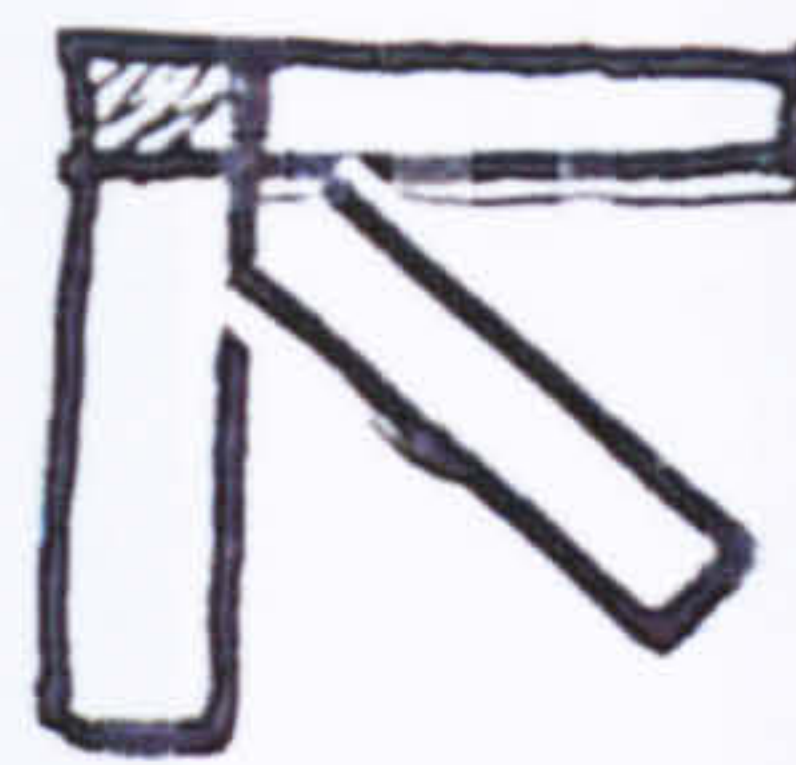




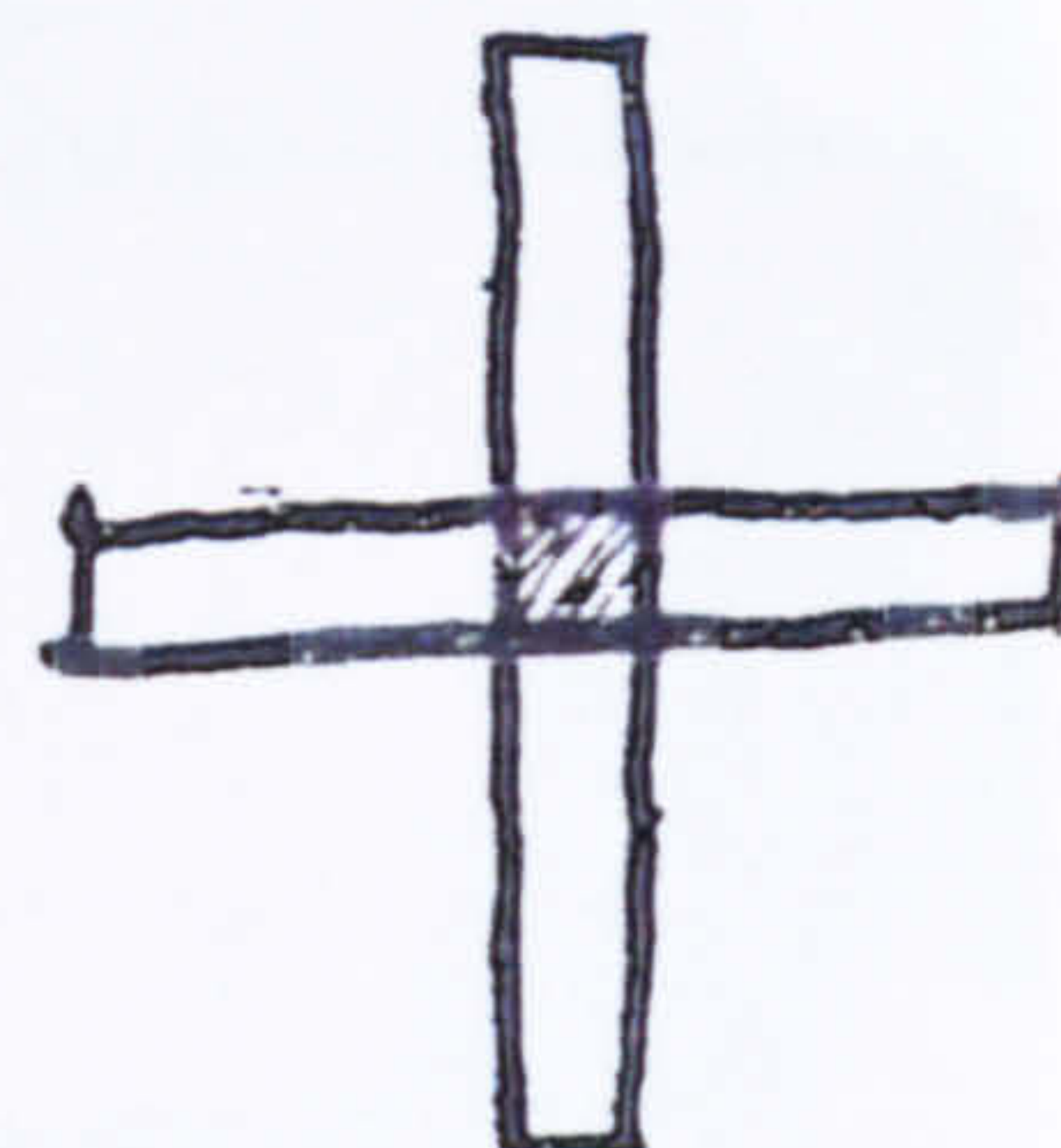
One to Four brackets in a row  
(Below *chajja*)



Two brackets in series  
(to span an opening)

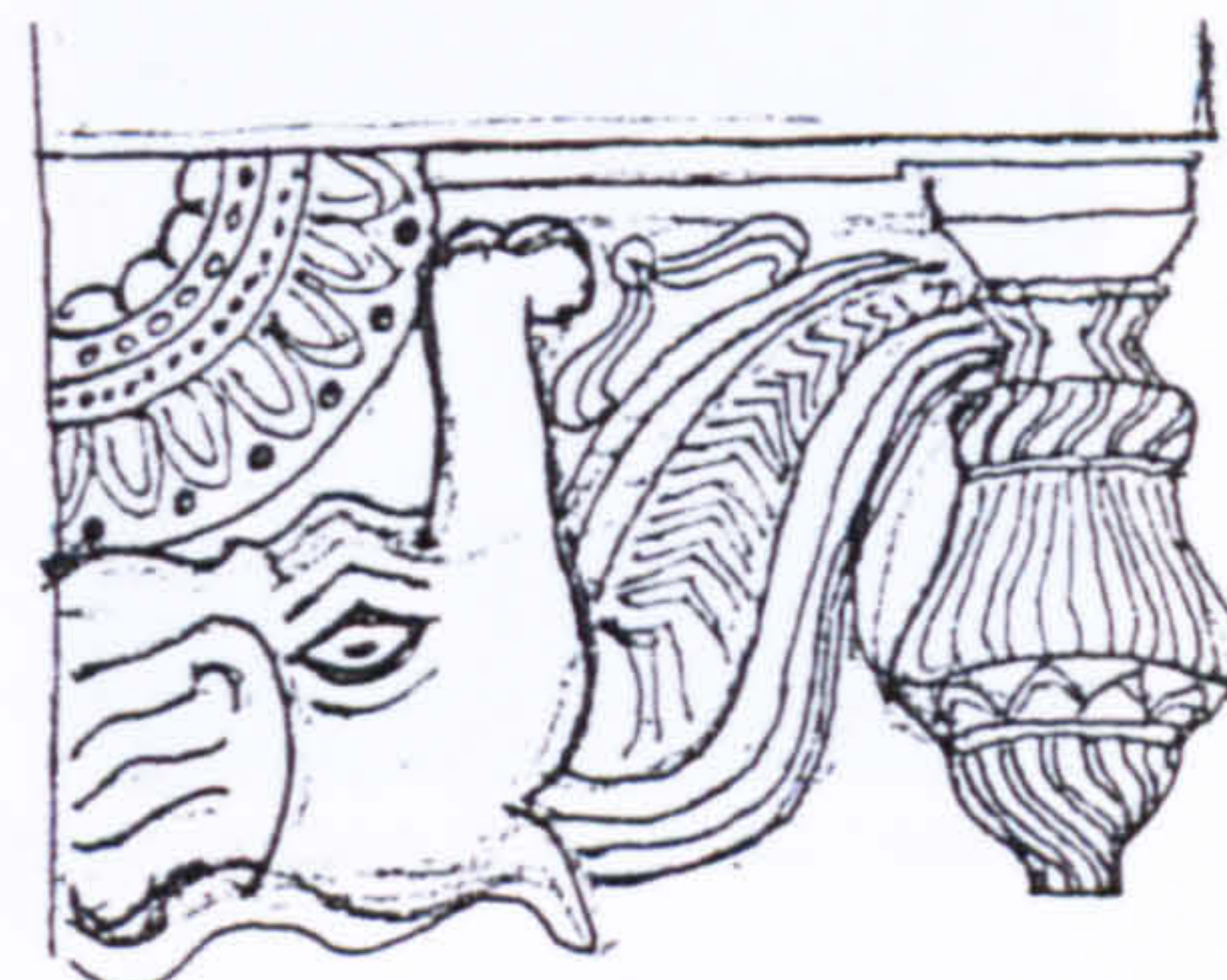
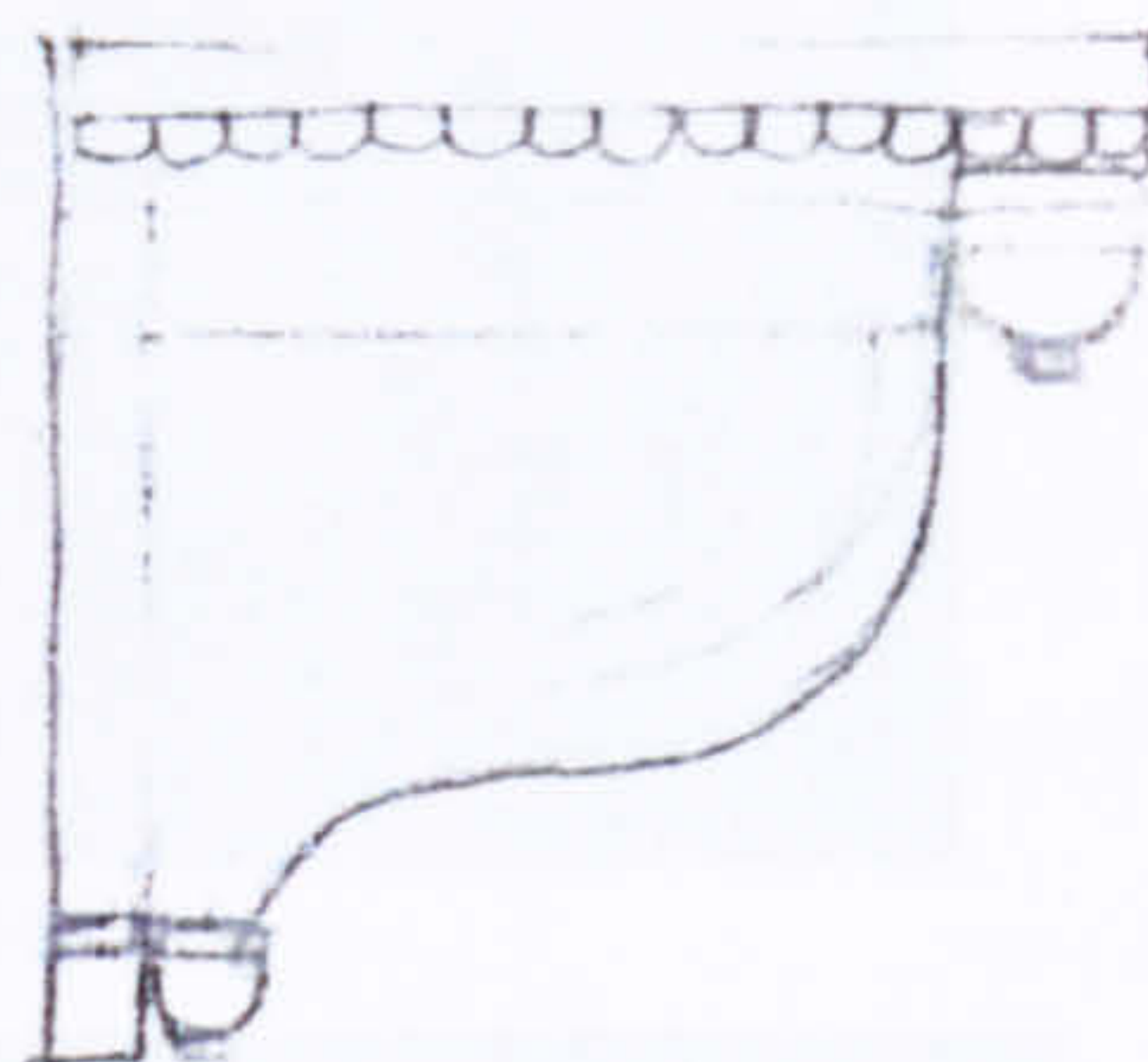
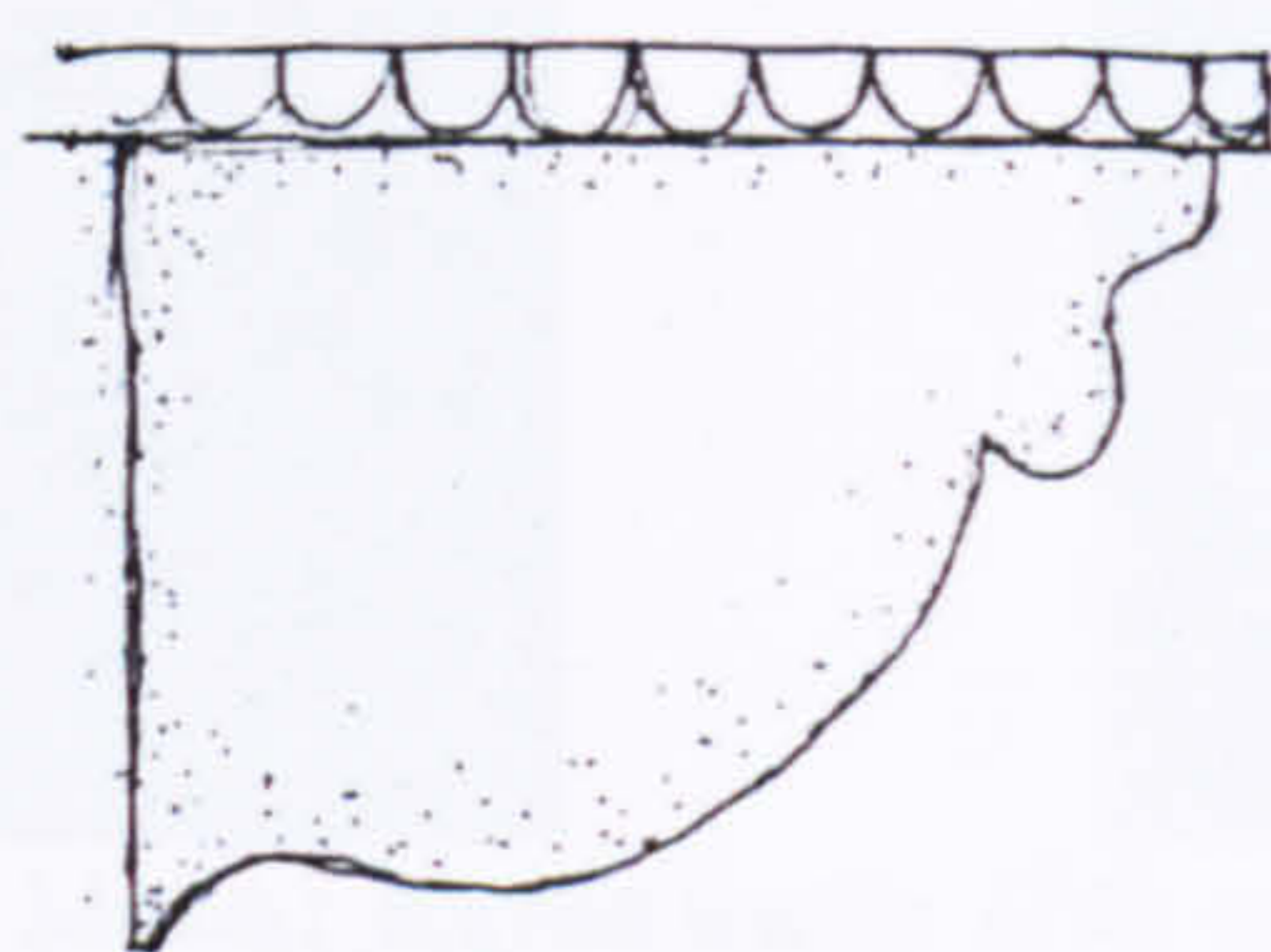
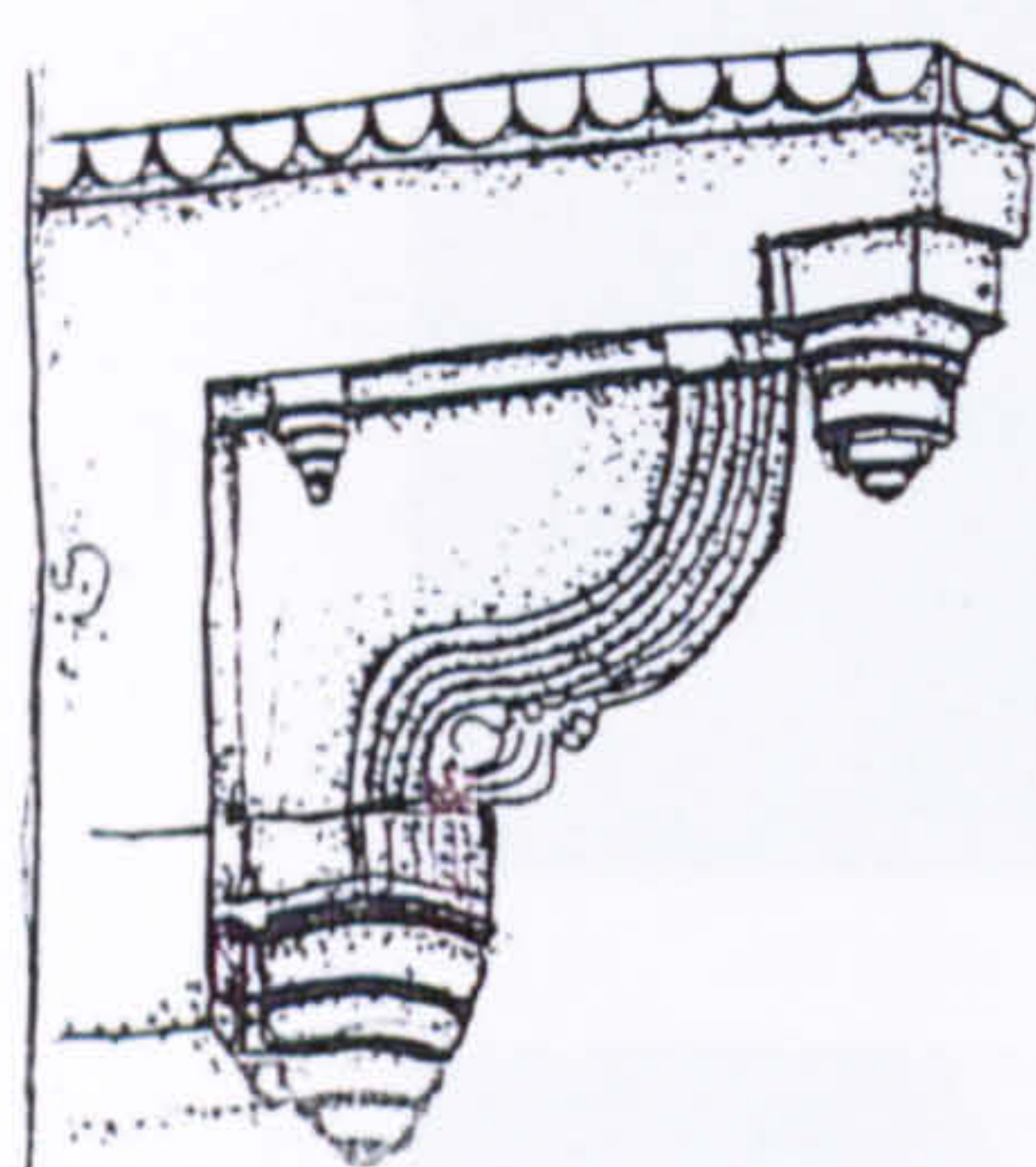


Three brackets  
(below corner of *chajja*)

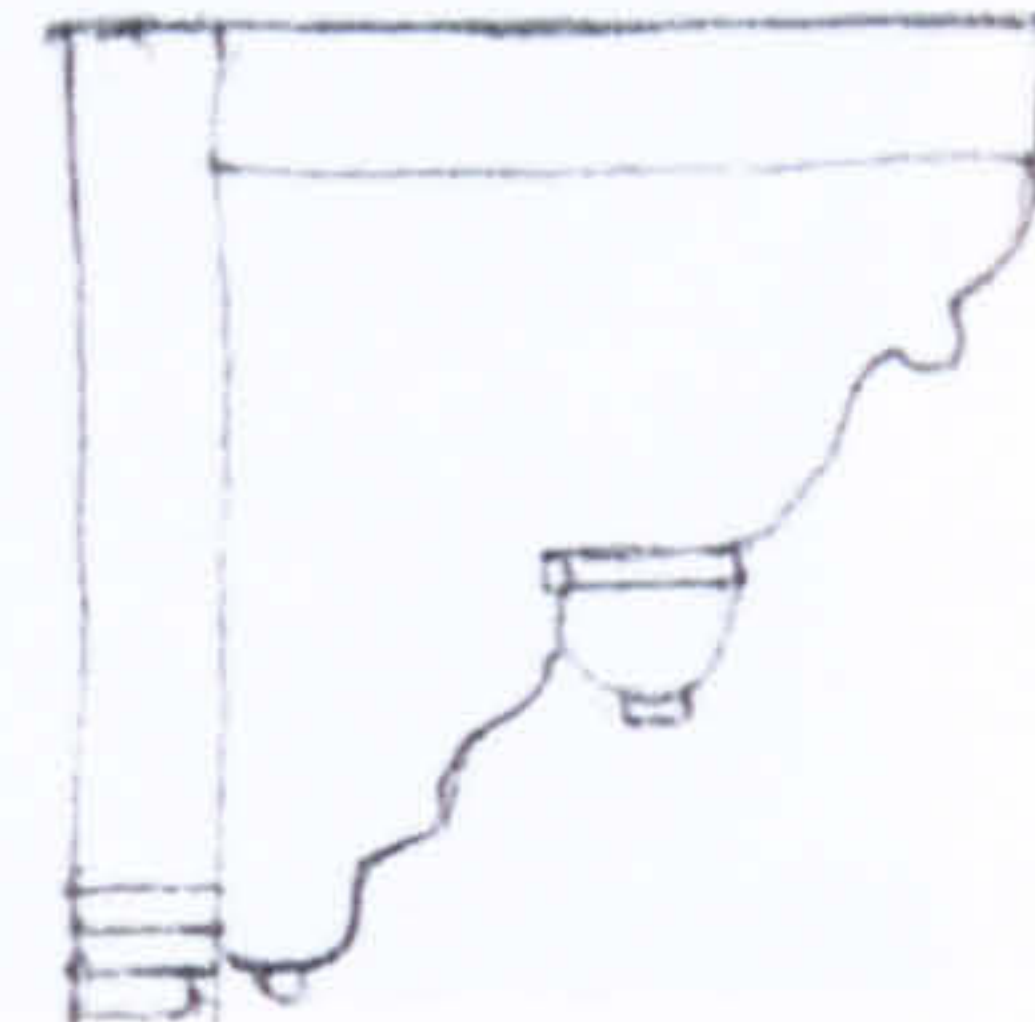
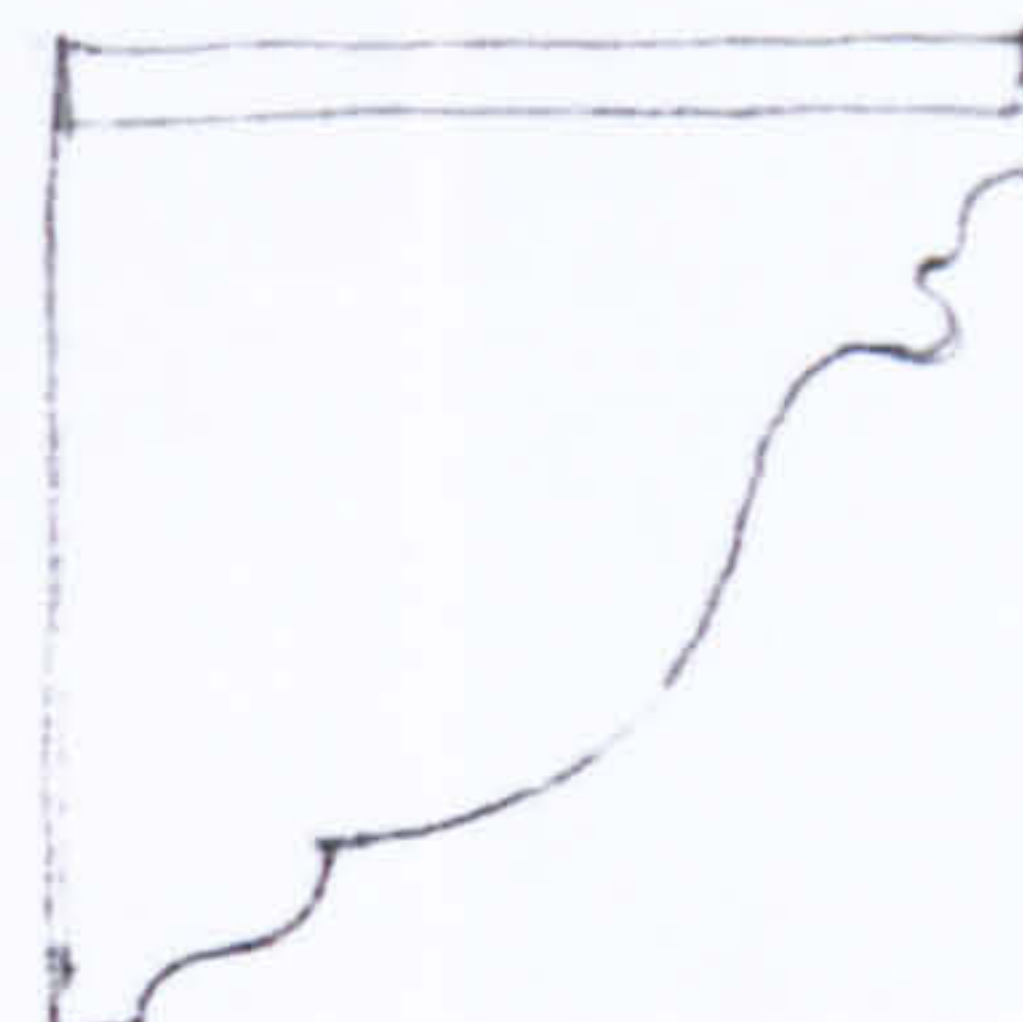
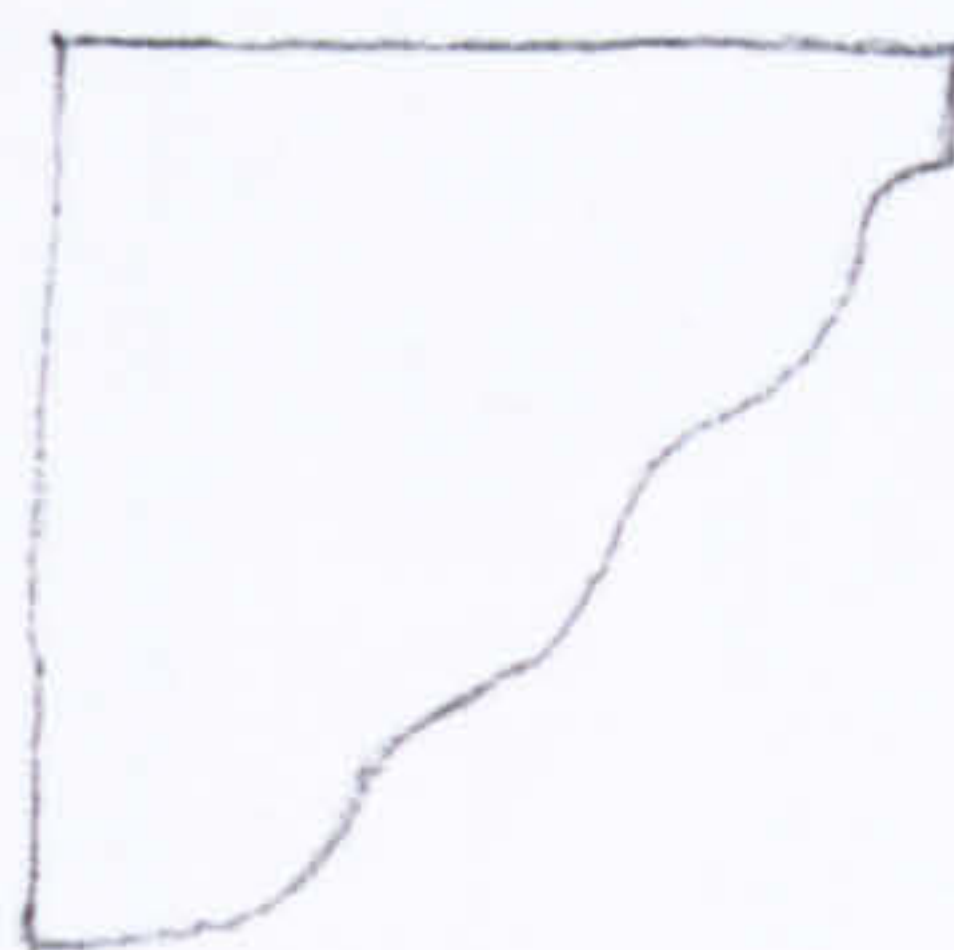
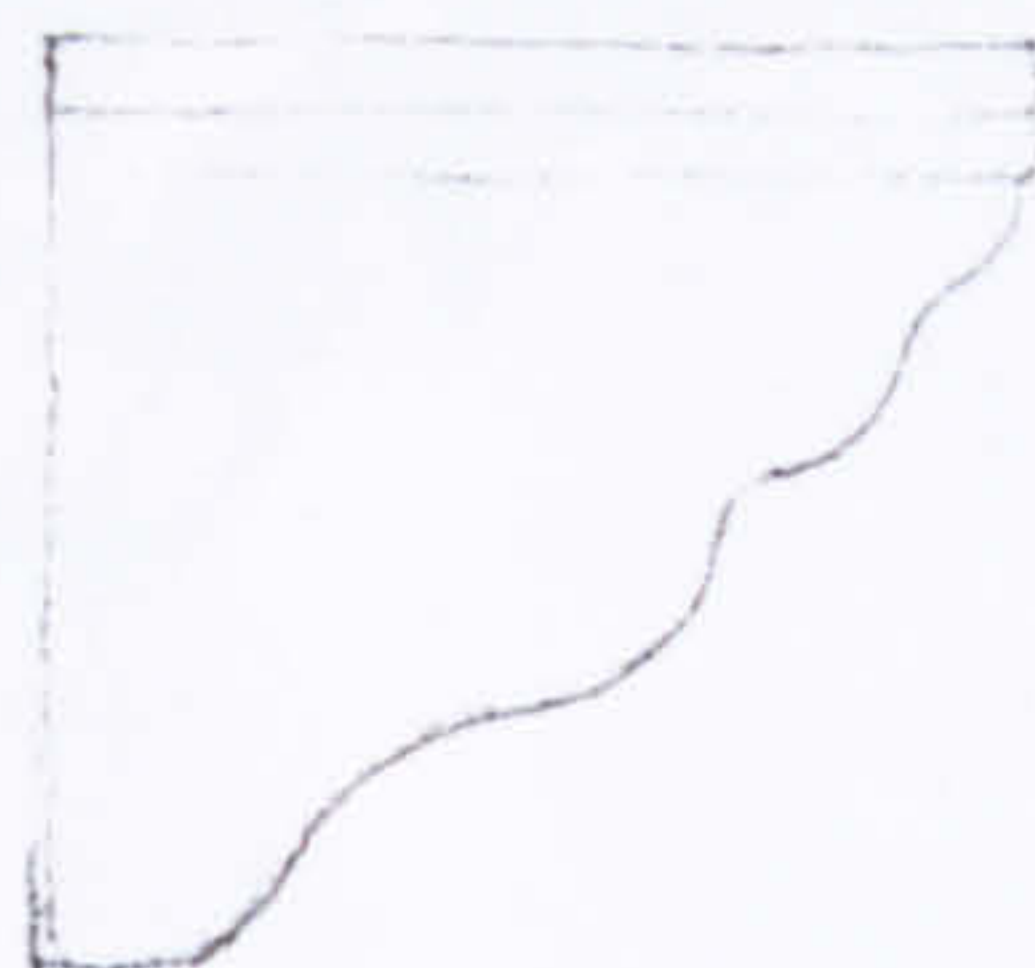


Four brackets  
(around a column)

Arrangement of Brackets in Plan



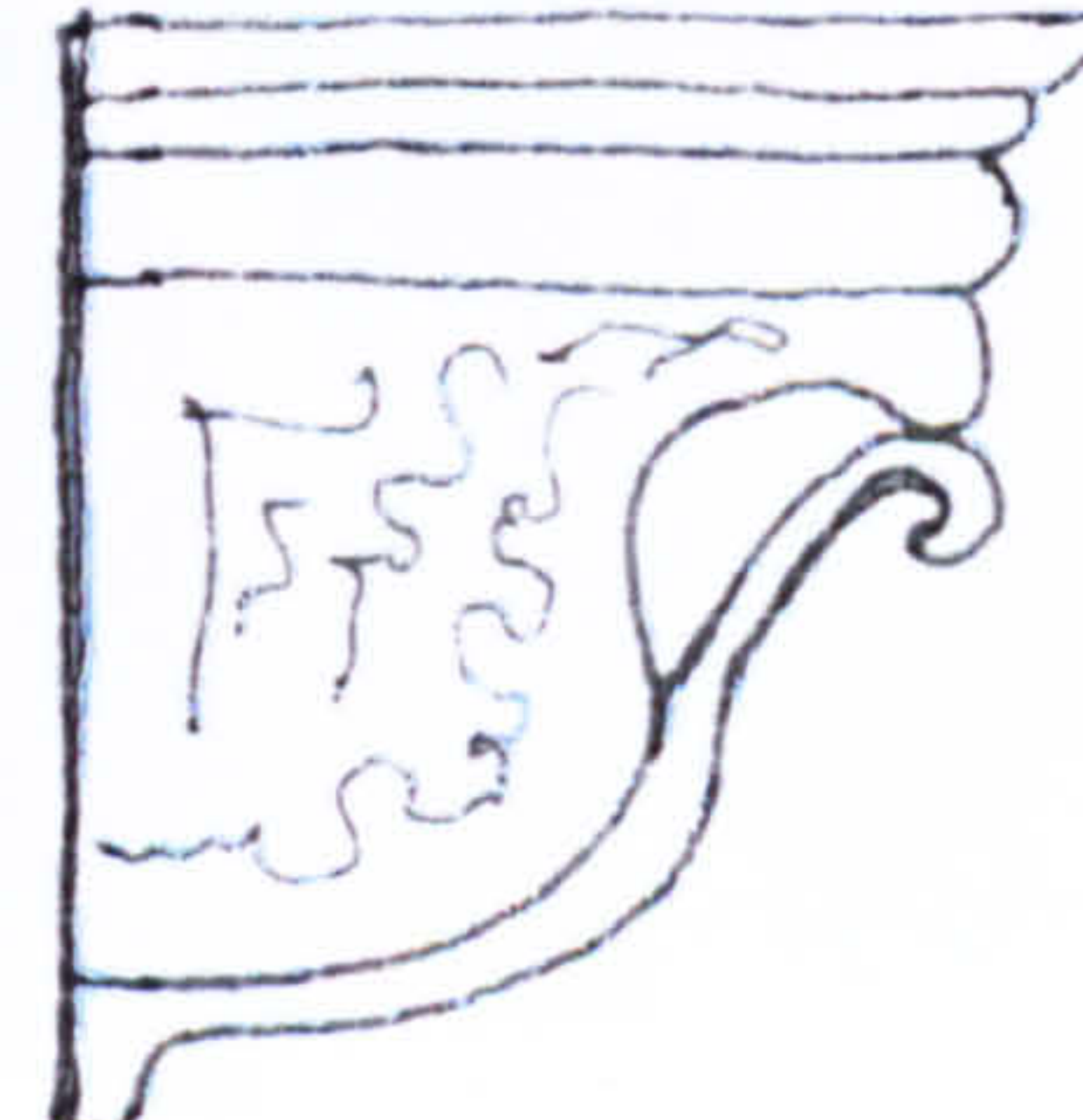
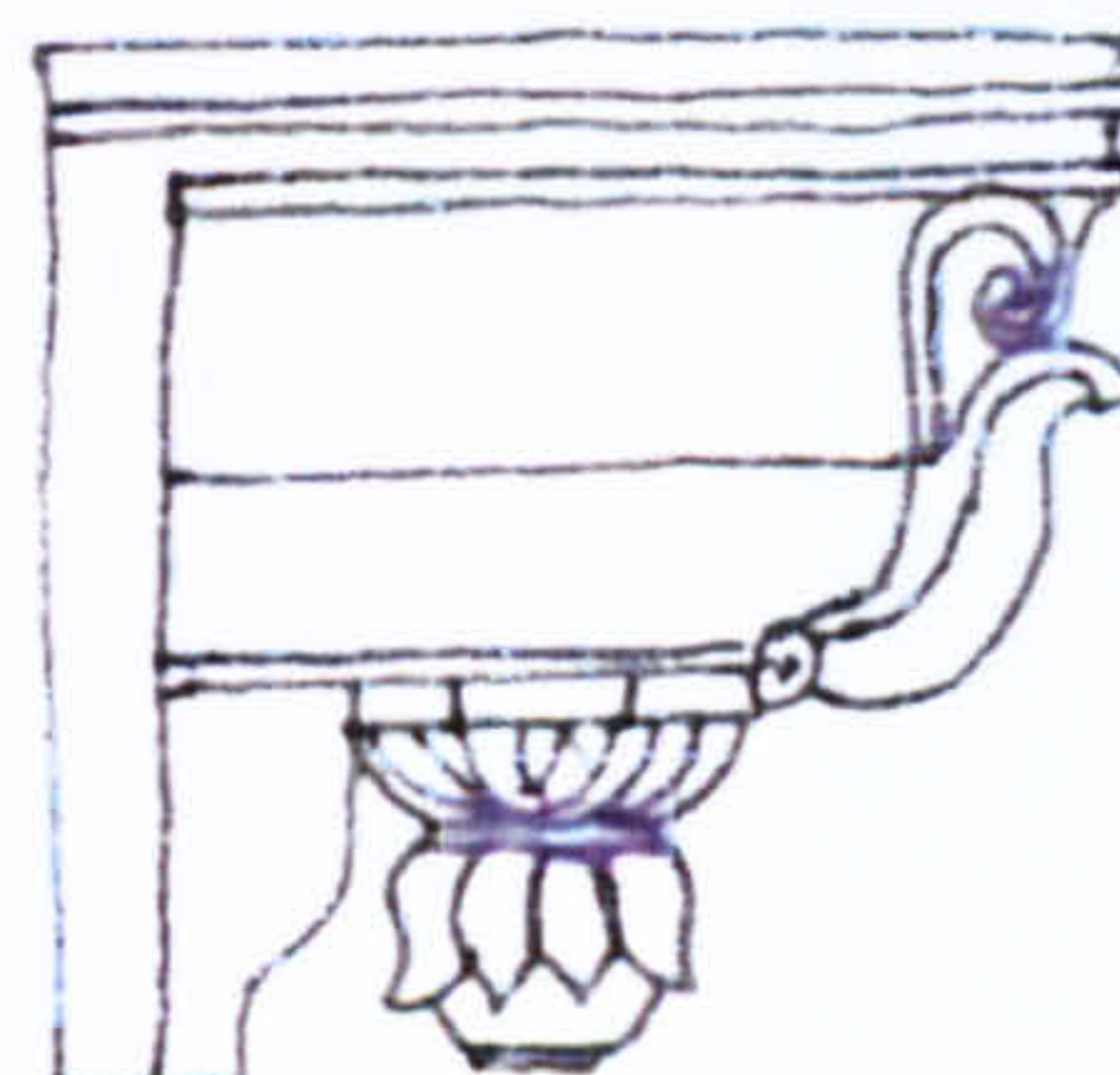
Dundhar region (17th Century)



Dundhar region. (18th and 19th century)



Godwad region (Late 19th century)



Hadoti region (17th and 18th century)

Figure 5.13a – Brackets in Rajasthan *Havelis*





Marwar region ( 17th century)



Marwar region (early 19th century)



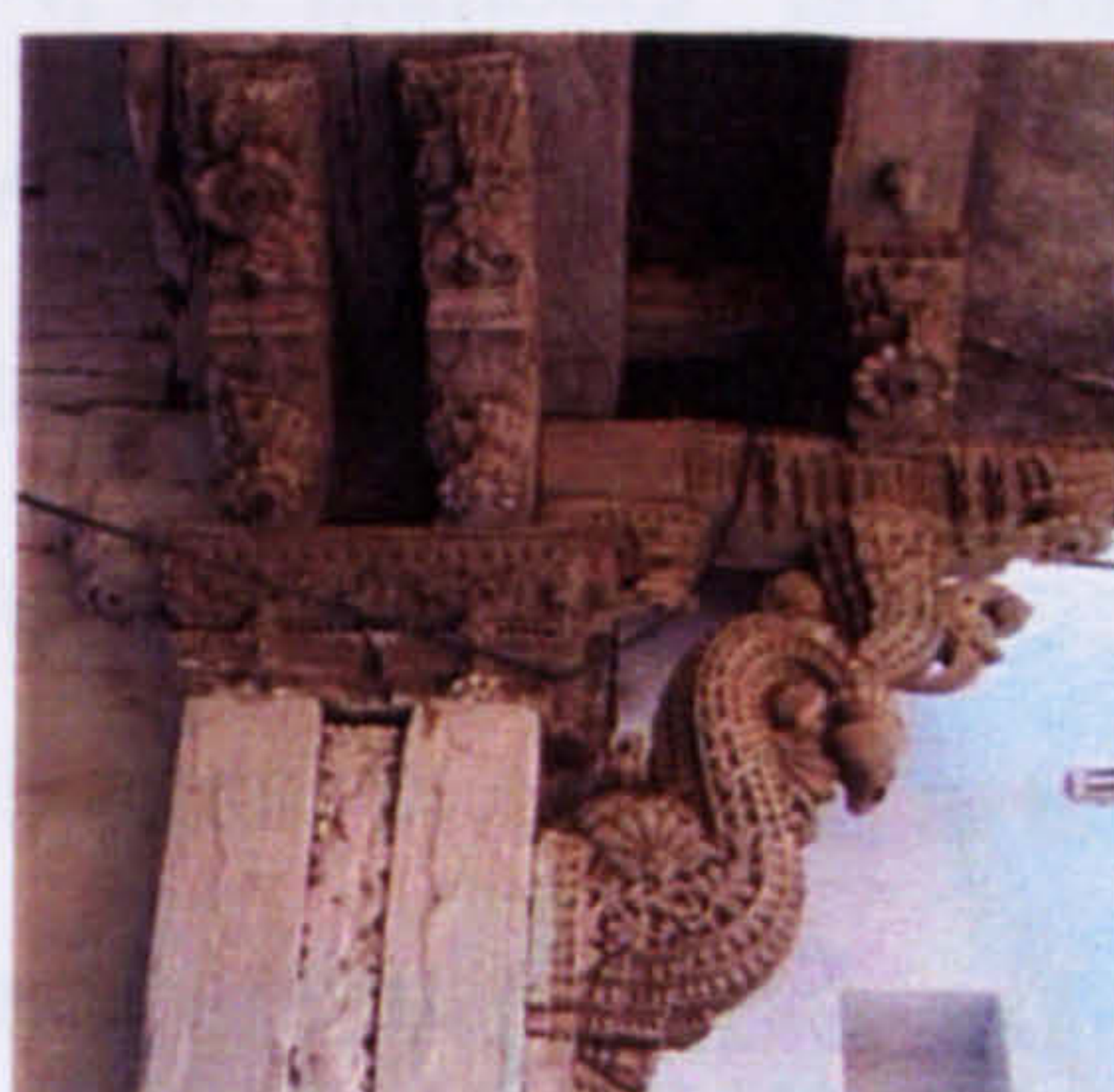
Marwar region (19th century)



Mewar region (early 17th century)



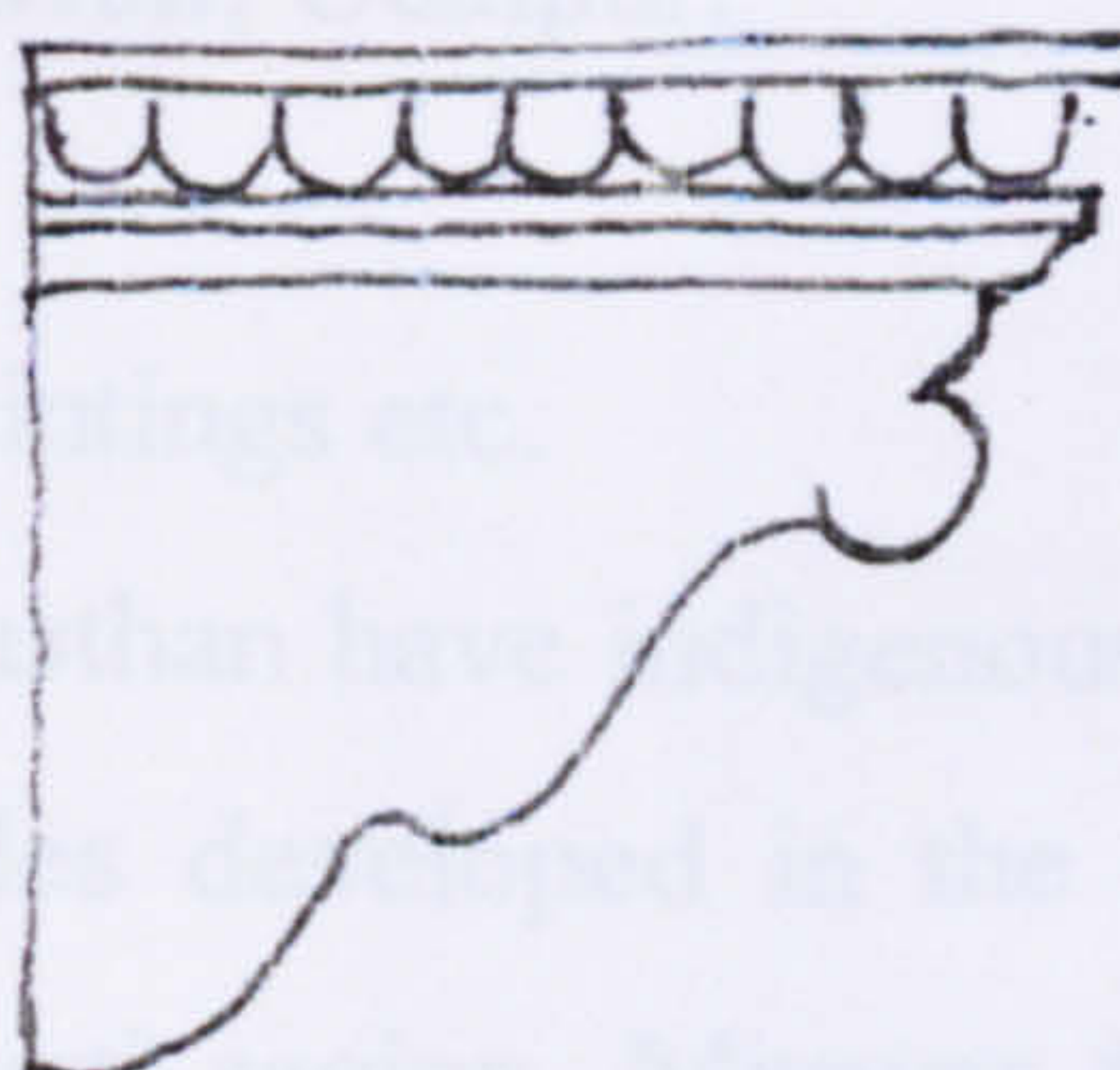
Mewar region (Late 17th century)



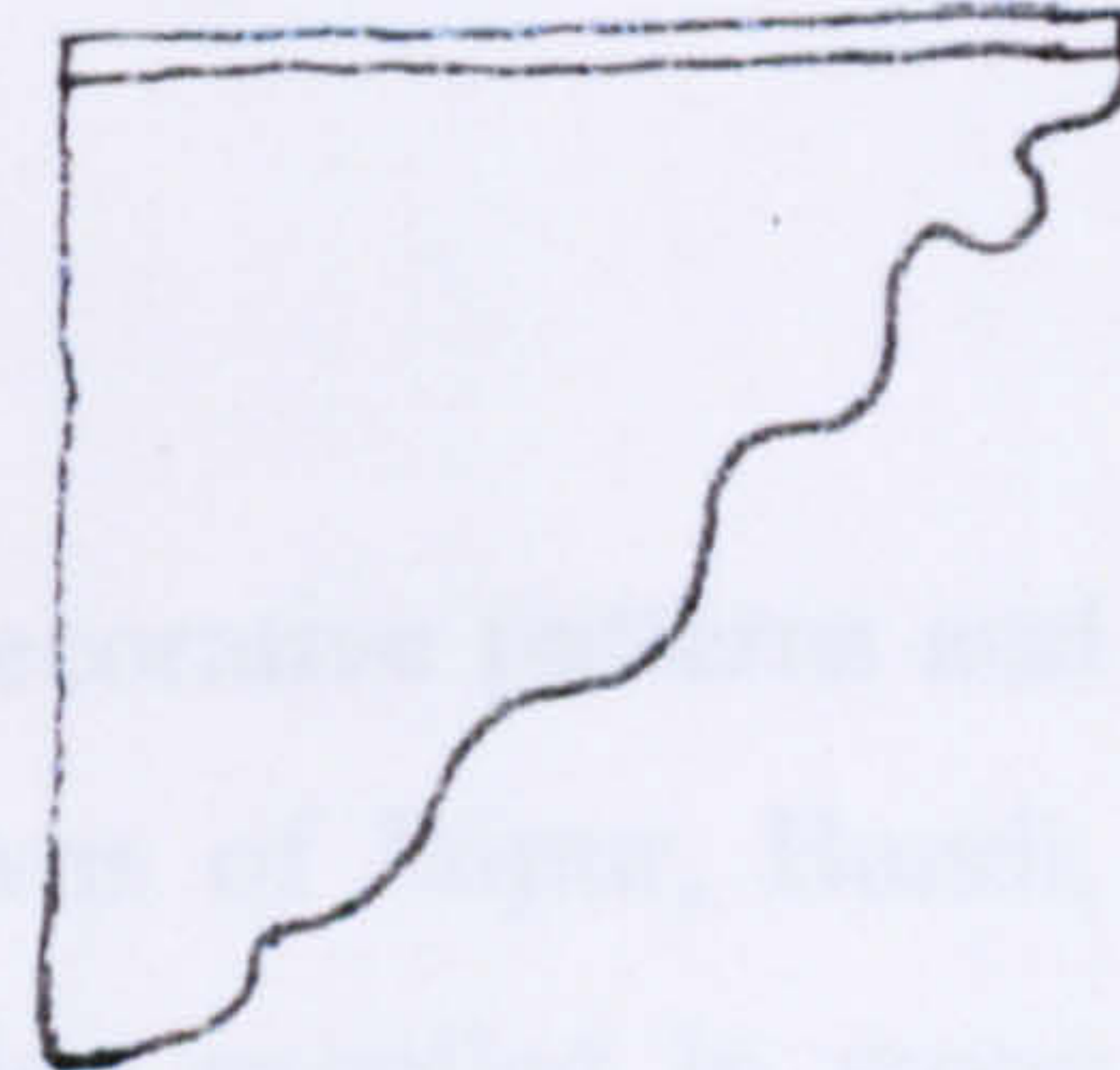
Mewar region (18th century )



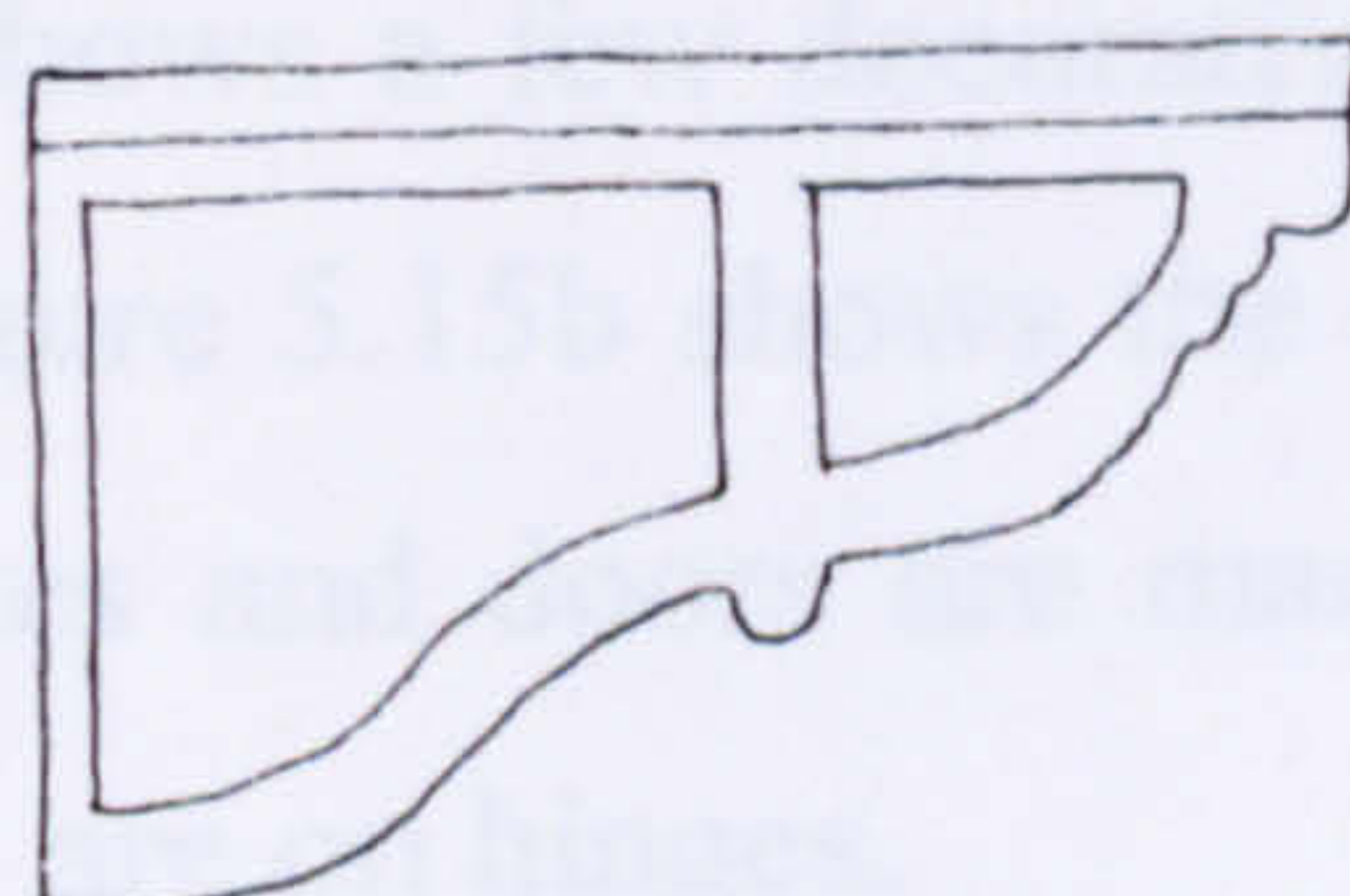
Mewar region (19th century)



Mewar- Brij region (Late 18th century)



Shekhawati region (19th century)



Vagad region (1750 A.D.)

**Figure 5.13b - Brackets in Rajasthan *Havelis***



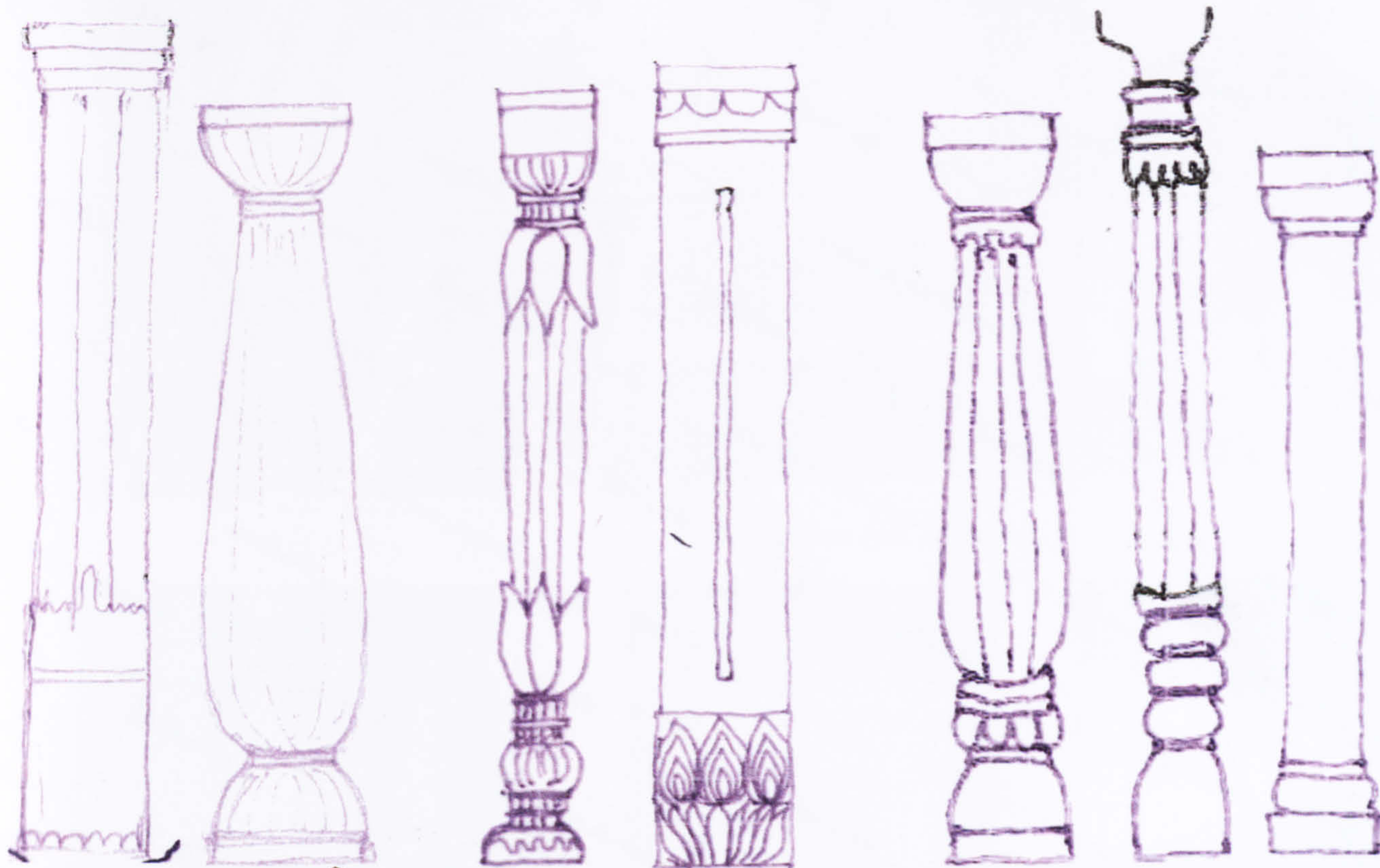
The brackets are shaped in various forms by the stone carvers and the wood carvers. These patterns are often floral, in the shape of a bird or an elephant's head and trunk. Most *havelis* in Rajasthan have stone brackets. Wooden brackets are found only in a few towns of Mewar region. These brackets occur in combinations - double, triple and four brackets. The various arrangements of brackets are also shown in Figure 5.13 a.

b) Elements of vertical demarcation - Columns are significant elements that demarcate space and support the structure in Rajasthan *havelis*. Two columns on each side are used to define an access point as seen in the entrance of each *haveli*. A series of pillars in 2, 4, 6.. numbers are normally used in the semi-covered space like the *tibari*. A double row of pillars is used for a hall like space. Figure 5.14 shows columns found in different areas of Rajasthan. The columns used in Rajasthan *havelis* are square, rectangular, round and octagonal. In most cases, they are made of stone except for a few places like Salumbher and Udaipur, where timber columns are also found. At times, they are decorated with mirror work as in *Dhabhai Haveli*, Udaipur.

c) Decorative Elements – Jalis, Paintings etc.

The *havelis* in each region of Rajasthan have indigenous decorative patterns and modes. Sub regional painting styles developed in the towns of Jaipur, Bundi, Udaipur, Kishangarh and Shekhwati region. Marwar region excelled in stone carving and *Jalis*. Figure 5.15 a shows a few decorative elements found on the exterior façades of the *havelis*. Figure 5.15b shows the doors and door lintels in different regions of Rajasthan. Gates and doors are made in wood. Main doors are often pivoted and the inner ones are on hinges.





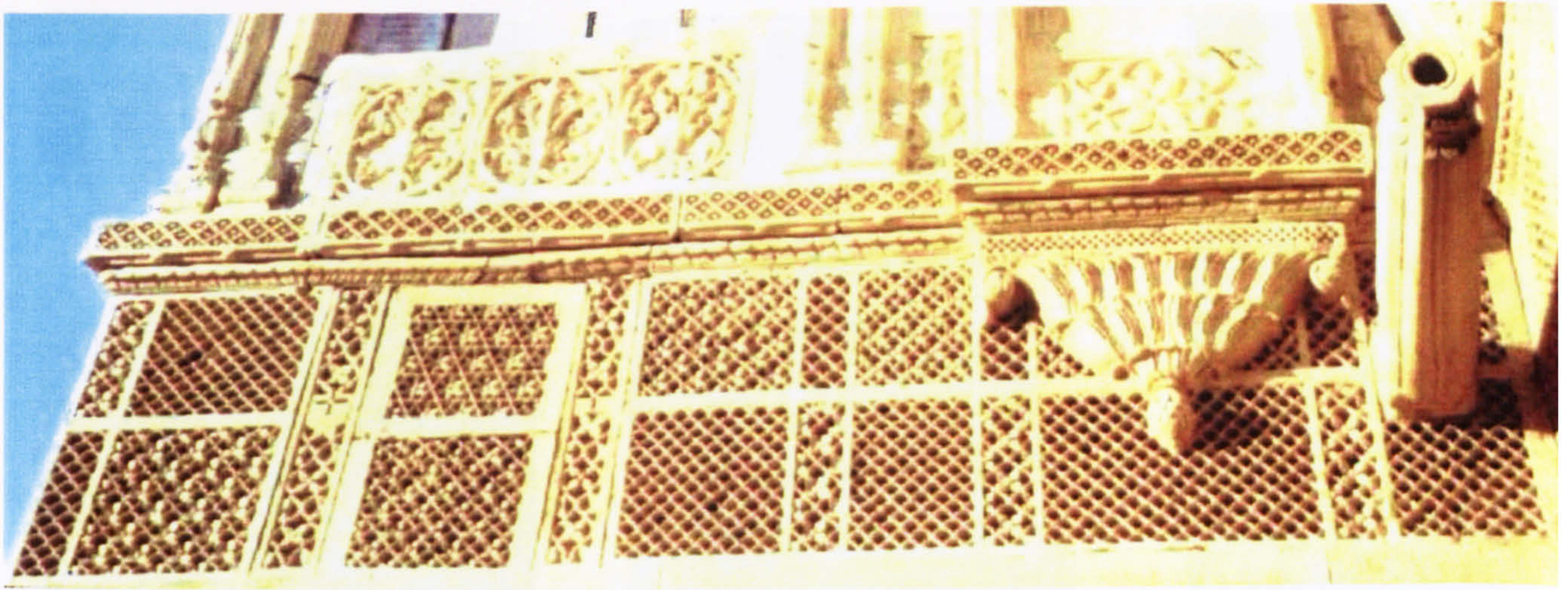
Dundhar region (17th century)    Hadoti region (17th century)    Mewat -Brij region (18th and 19th century)



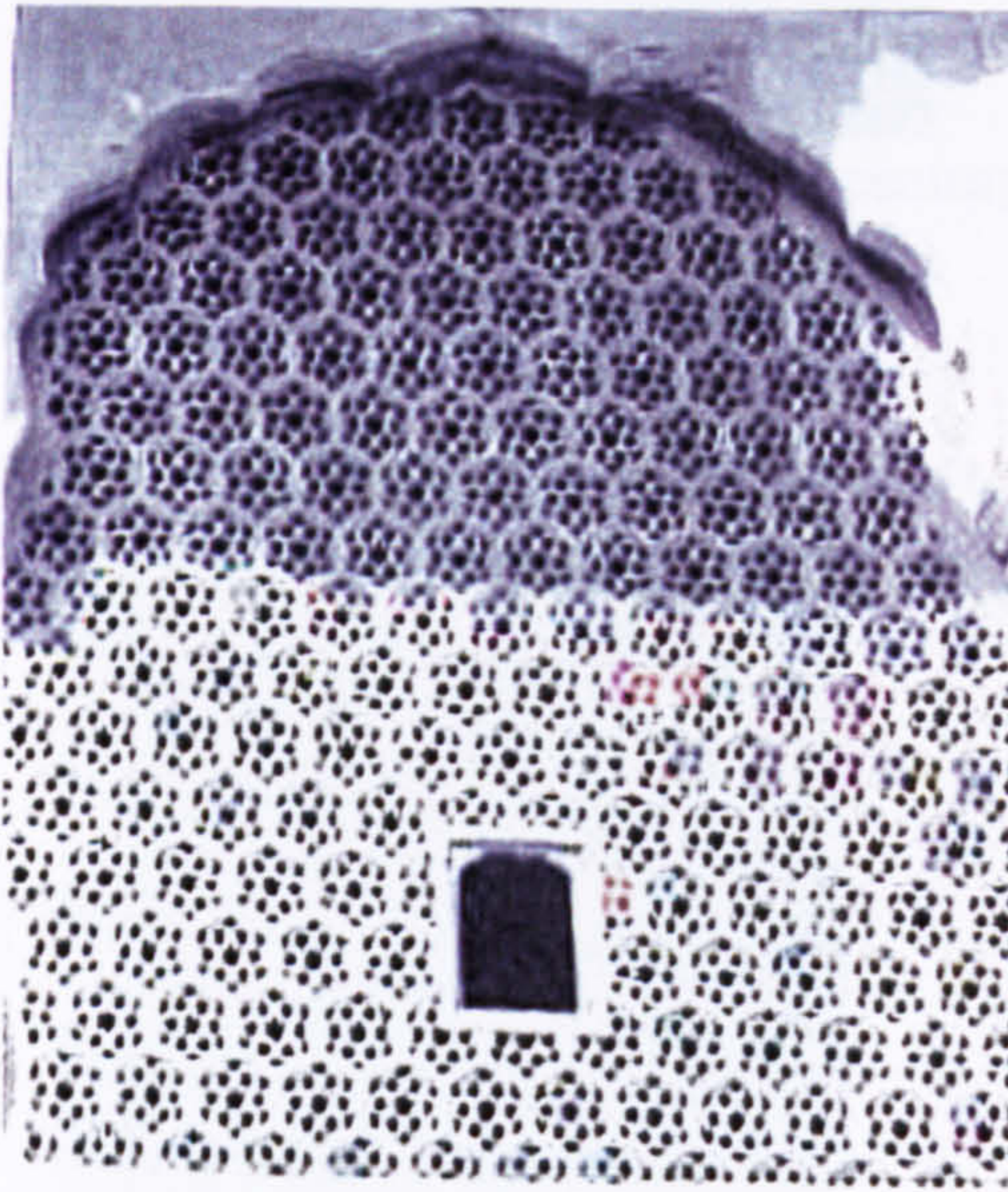
Mewar region (17th century)    Mewar region (18th century)    Mewar region (19th century)    Marwar region (19th century)    Shekhawati (19th century)

**Figure 5.14 – Columns in Rajasthan *Havelis***





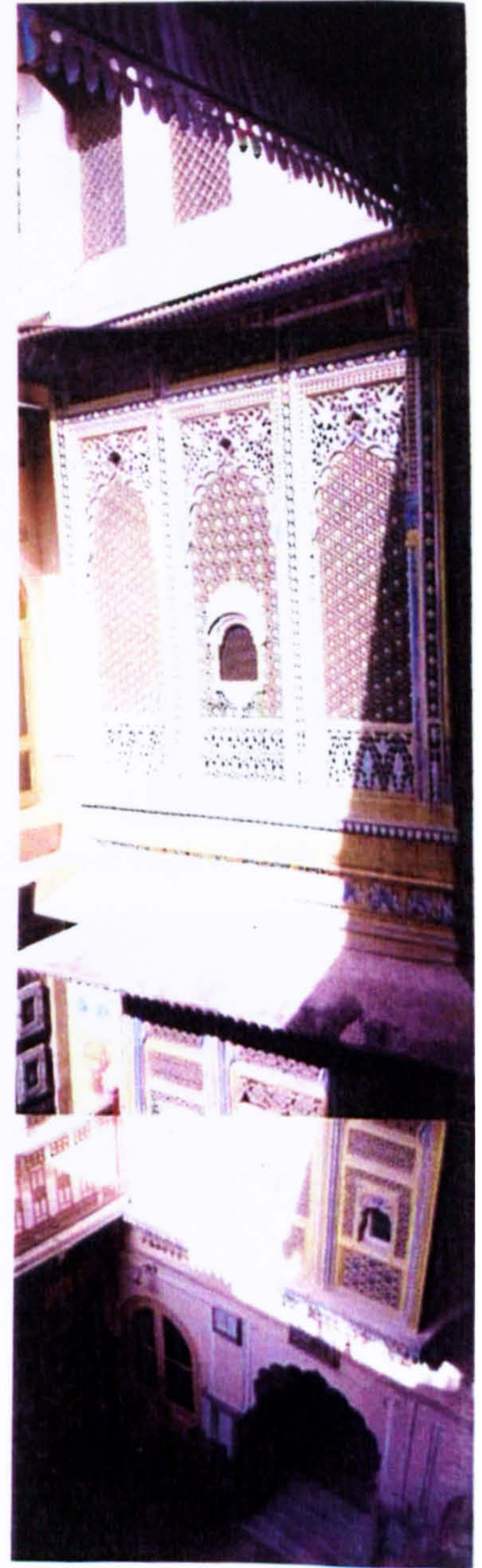
Sandstone Jali, Jaisalmer, Marwar region (19th century)



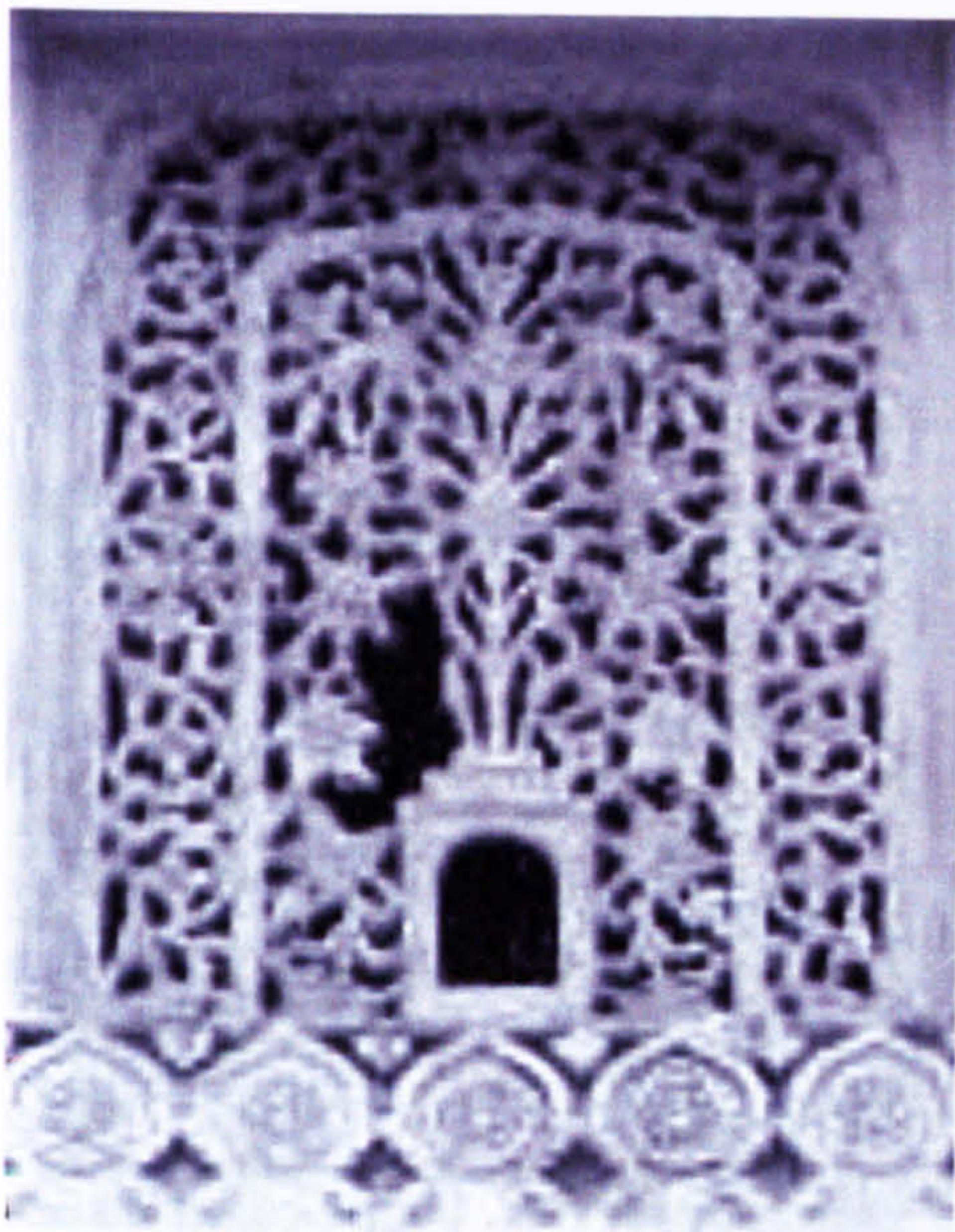
Lime Plaster Jali, Amber, Dundhar region (17th century)



Jaisalmer, Marwar region (19th century)



Lime Plaster Jali, Ajmer, Merwara region (19th century)



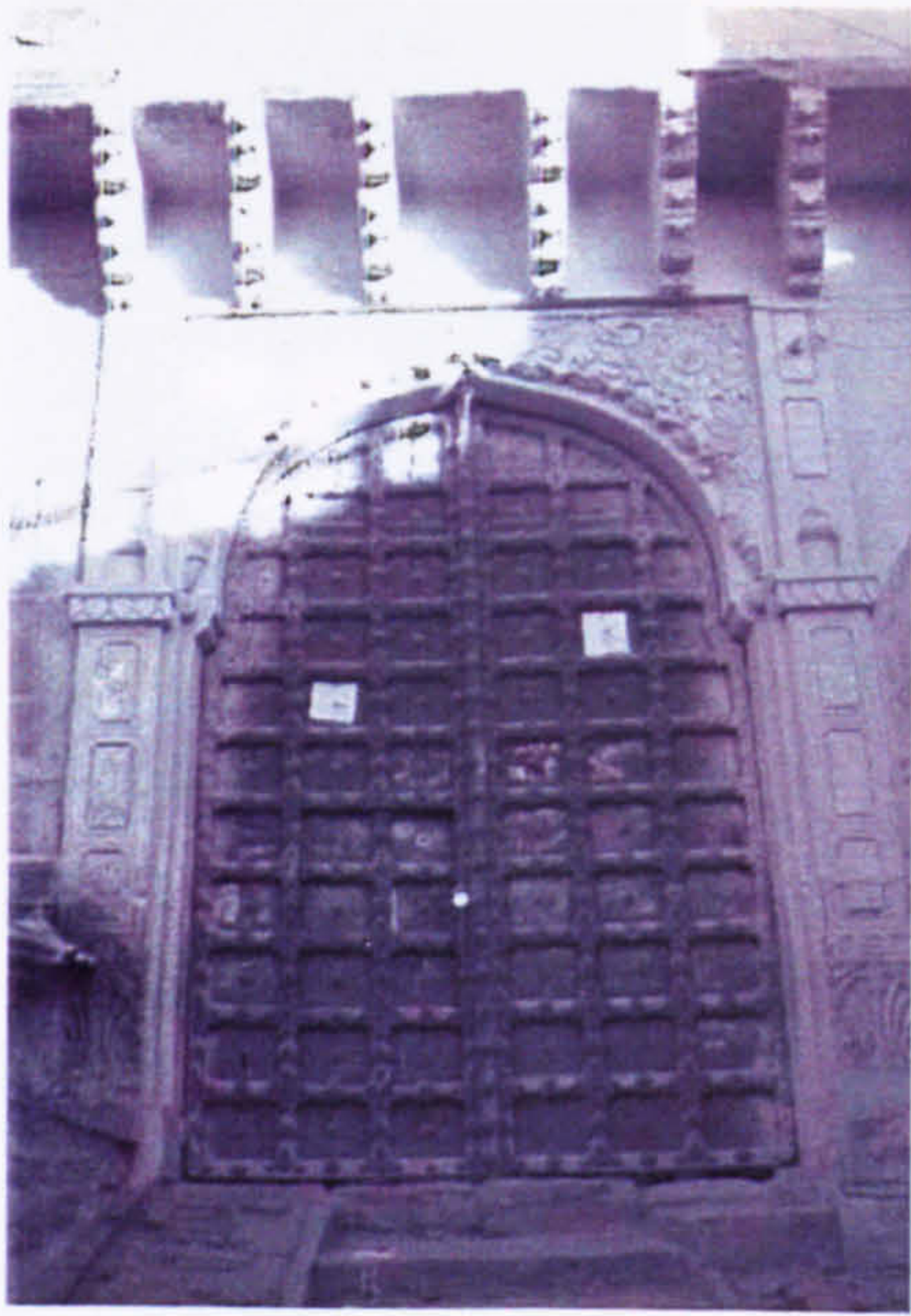
Lime Plaster Jali. Jaipur, Dundhar region (20th century)



Water spout, Pokhran, Marwar region (19th century)

**Figure 5.15a – Jalis in Stone and Lime Plaster**

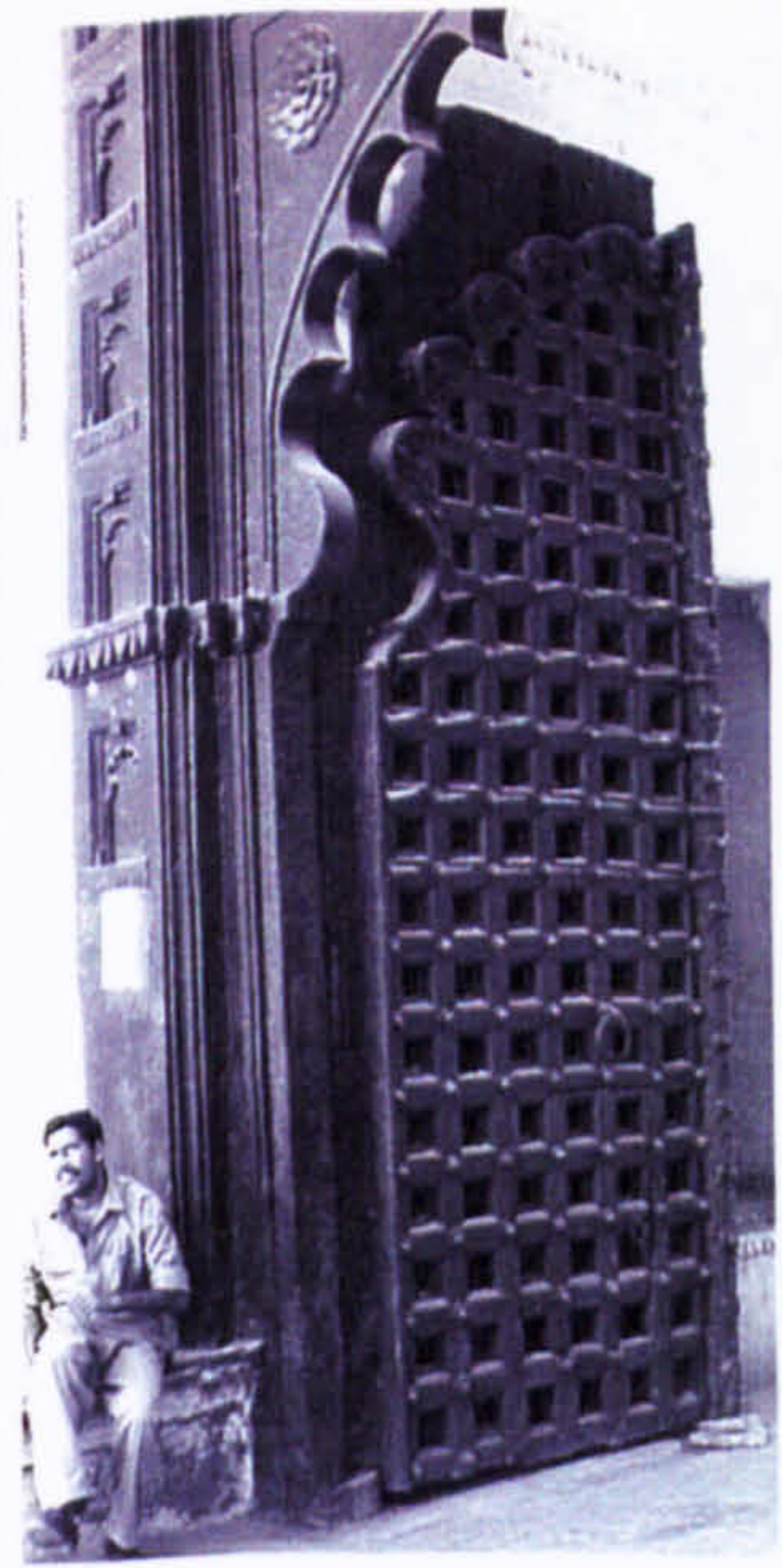




Jodhpur, Marwar region (18th century)



Shekhawati region (18th century)



Mewar region (17th century)



Salumbher, Mewar region  
(18th century)



Sojat, Marwar region,  
(18th century)



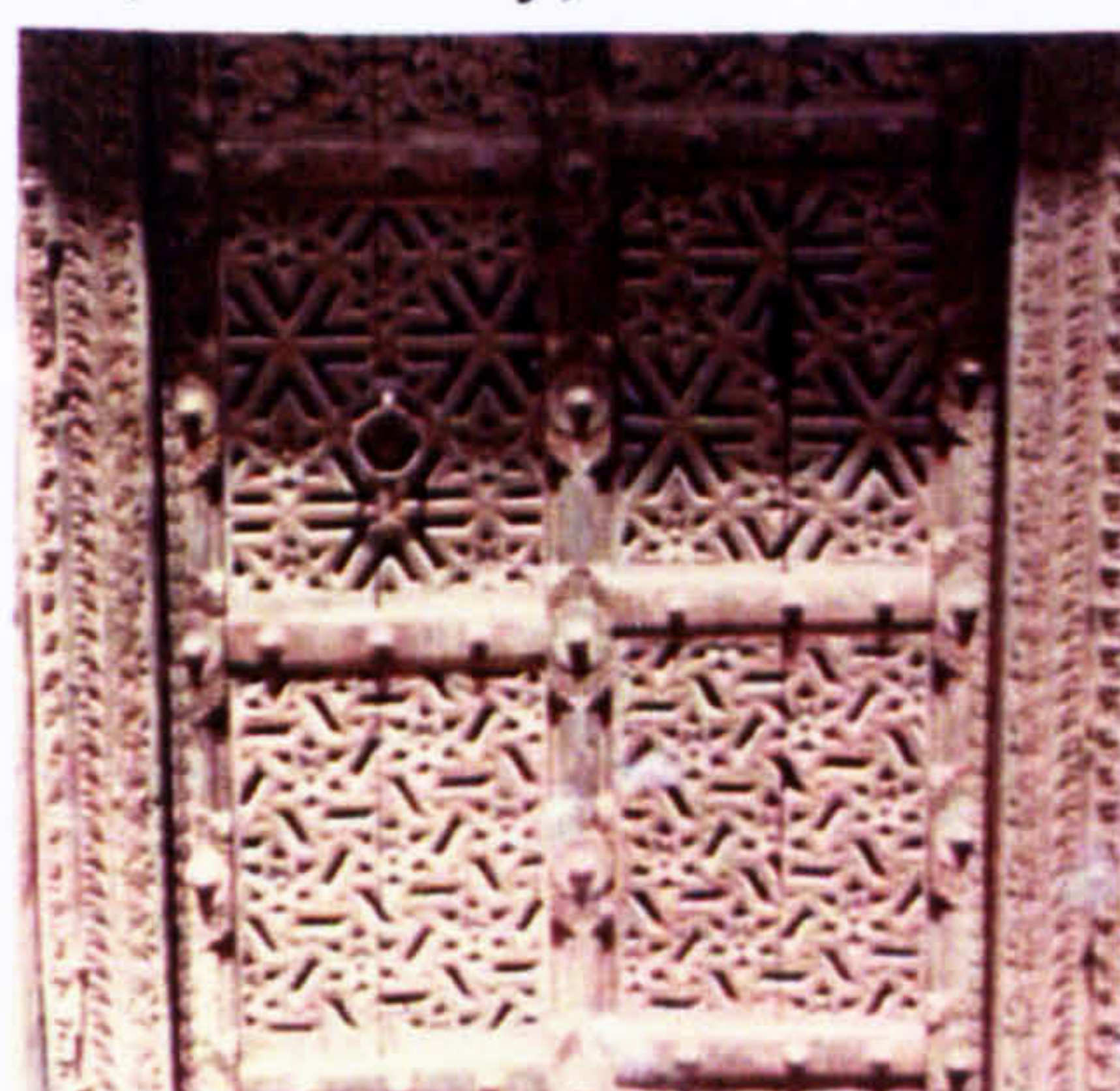
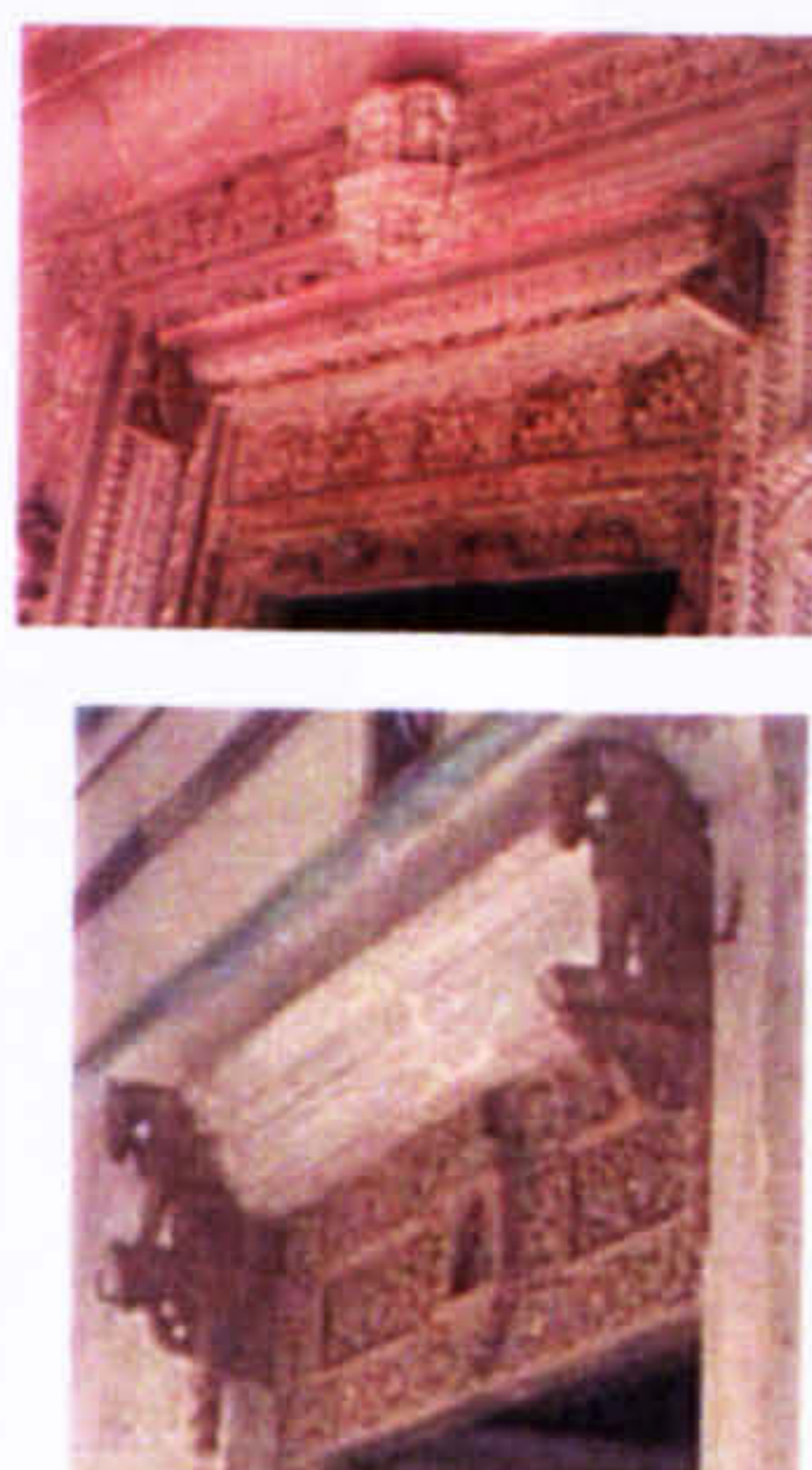
Mewar region (17th century)



Vagad region (18th century)



Marwar region (19th century)



Wood carving, Shekhawati region  
(19th century)

**Figure 5.15b - Gates, Doors and Door Frames**





Mewar region (19th century)



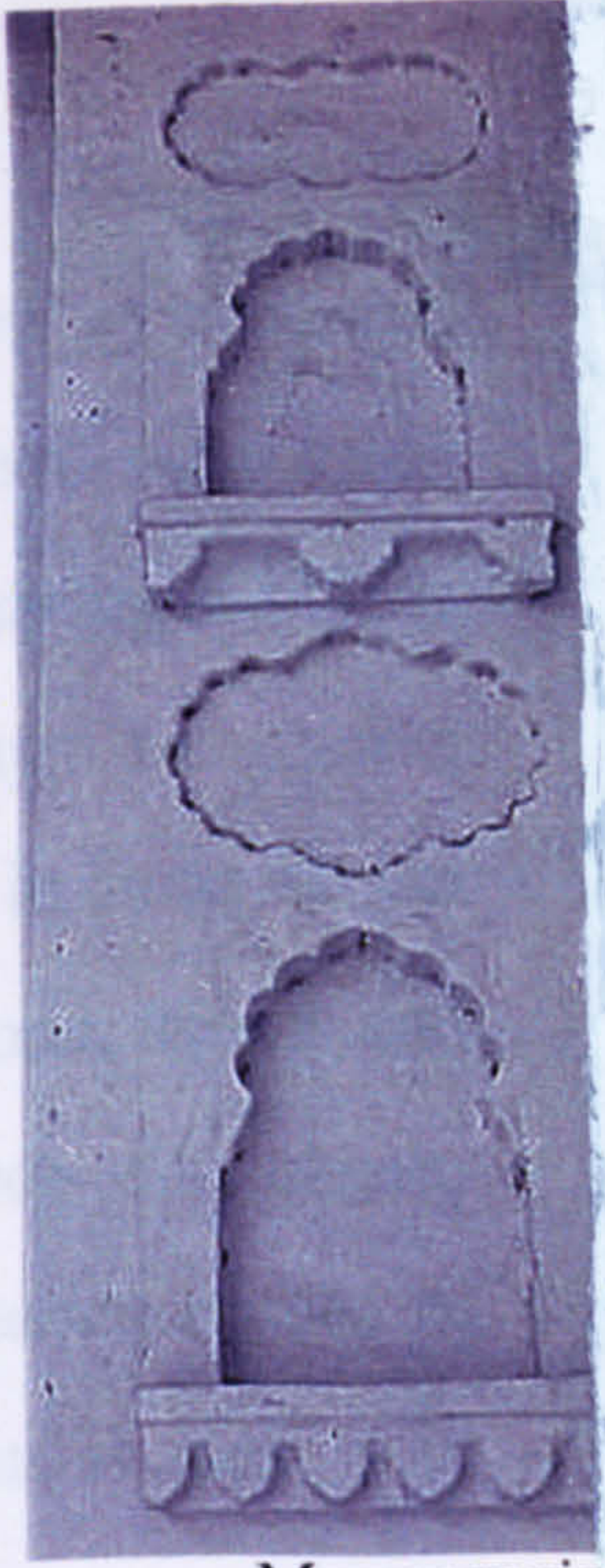
Dundhar region (18th century)



Mewar region (19th century)



Mewat-Brij region (18th century)



Mewar region (19th century)



Mewar region (17th century)



Marwar region (18th century)



Dundhar region (18th century)



Godwad region (18th century)



Wall painting, Mandawa Shekhawati Region (19th century)



Wall Paintings, Salumbher, (Mewar region (18th century)



Wall painting, Udaipur, Mewar region (17th century)



Wall Painting, Kota, Hadoti region

Figure 5.15c –Decorative Interiors and Wall Paintings



The main gate in bigger *havelis* had a smaller opening called '*mori*' as observed in the gate in Shekhawati region. The door lintels, in stone or wood were often carved intricately. In some cases, the inner wooden doors are also carved. It is interesting to note that whatever the size of the opening, it always had double doors (a possible expression of duality in Indian society). Doors in Bade Devta *Haveli*, Kota had ivory work. The pegs in the *havelis* are of stone, wood and copper in the shapes of animals like horse and elephant or birds like parrot. Figure 5.15c show the various decorative elements used in the interior spaces of the *havelis* of Rajasthan. This includes functional niches in various shapes, wall paintings and decorative work on beams and ceilings.

## 5.2 Generic Principles of Façade Composition

The above study of the *haveli* façades establishes the following rules regarding their composition:

- a) The façades evolve from the inner court elevations to the outer court and the exterior, thus emphasizing the significance of the inner court. The façades follow the pattern of centric demarcation with the inner court centre corresponding to the centre in court elevations and finally expressed in the exterior elevation.
- b) The centres and sub centres in the façade are emphasized by the placement of aedicules or by framing of two aedicules on either side. The composition of an aedicule is also centric in nature.

The centre and sub centres in the *haveli* plan are demarcated at every step in the façade whether it corresponds to the central bay in the court elevations, or an



aedicular placement that denotes the centre of an interior space and even in the aedicular placement of niches inside the rooms. Beyond these rules of architectural grammar, sub regional stylistic variations are also observed in the aedicules and elements that create the sub regional identities of the *haveli* façades.

## 5.2 Sub Regional Variations in the *Haveli* Façades

The *haveli* façades in Rajasthan show a distinct transformation between the Mughals (1550-1700 A.D.) to the British time period (1750-1950 A.D.) as the patronage of building *havelis* moved from the hands of Rajput feudal chiefs to the Marwari Hindu traders. These two distinct trends that can be classified as ‘The Rajput pattern’ which had a blank fortress like wall with ‘aedicules’ introduced in specific places and ‘The Marwari pattern’ which emphasized on ornamentation and the composition was flooded with aedicular juxtapositions with hardly any blank surface on the façade. Another formal distinction can be identified in the pre-Jaipur *haveli* pattern which follows the asymmetric, non axial Hindu planning and the post-Jaipur *havelis* that have symmetric and axial planning (probably a combined influence of Mughal axial planning and *Mandāla* patterns). This formal variation in Rajasthan *havelis* can also be interpreted in terms of Hindu planning and Mughal planning. According to Kurula Varkey, <sup>2</sup> ‘The Indian notion of form is coming together of diverse parts into a complex unity. The forms are additive and in being so, open and changeable. Islamic principle uses the ideas of singular completeness of form with finite compositional balance.’ This difference is observed in the façade treatments of the *havelis*. In the asymmetrical façades, the parts are treated

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<sup>2</sup> Varkey, Kurula. *A+D*, Jul.- Aug.2000, p.101



separately yet aiming towards an ideational unity in the composition, reflecting that form in Indian context is additive and infinite. It allows the flexibility of adding to the existing form without disturbing the balance. On the other hand, the *havelis* of later period as in Jaipur and post-Jaipur developments have formal and symmetrical façades, reflecting the Islamic view of finite composition. The façades are designed on a formal axis with symmetrical composition and balanced geometry. They do not allow the flexibility to add more to the existing form unless the addition is also balanced and symmetric. However, it is the underlying rules of compositions that persist in the façades beyond the formal styles.

Thus two broad stylistic trends that also conform to the spatial typology of *havelis* the Rajput style and the Marwari style. Although, a chronological evolution of the *haveli* façades and elements is not attempted, yet these two broad styles follow a pattern of evolution of the aedicules as suggested by Adam Hardy. He identifies some of the evolutionary tendencies as increasing ‘aedicularity’, aedicular density’ and ‘central emphasis’<sup>5</sup>. An increase in these characteristics is evident from the Rajput fortress style of the earlier times to the Marwari style that developed during the British period. Besides these, distinct sub regional variations are evident in the aedicules, reflected in the variety in façades. This can be largely attributed to the availability of materials and the local masons in these areas.

In **Dundhar region**, (Figure 5.16a,b,c) the façades of the post Jaipur towns (Jaipur, Sanganer, Samode) show a rhythmic alteration of projected and surface aedicules of both simple and composite kinds based on the Marwari pattern..

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<sup>5</sup> For more details refer Adam.Hardy’s article Form, Transformation and Meaning in Paradigms of Indian Architecture.p124-125





Kachwaha Haveli, Amber



Composite projected aedicules, Haveli, Sangner



Rhythmic composition of simple projected and composite projected aedicules, Natani Haveli, Jaipur



Alternate arrangement of simple projected and composite projected aedicules, Saraf Haveli, Jaipur

**Figure 5.16a - Façades - Dundhar Region**





Entrance aedicule,  
Pandit Shivdin Haveli, Jaipur



Simple and Composite Projected aedicules with  
chatri frame, Natani Haveli, Jaipur



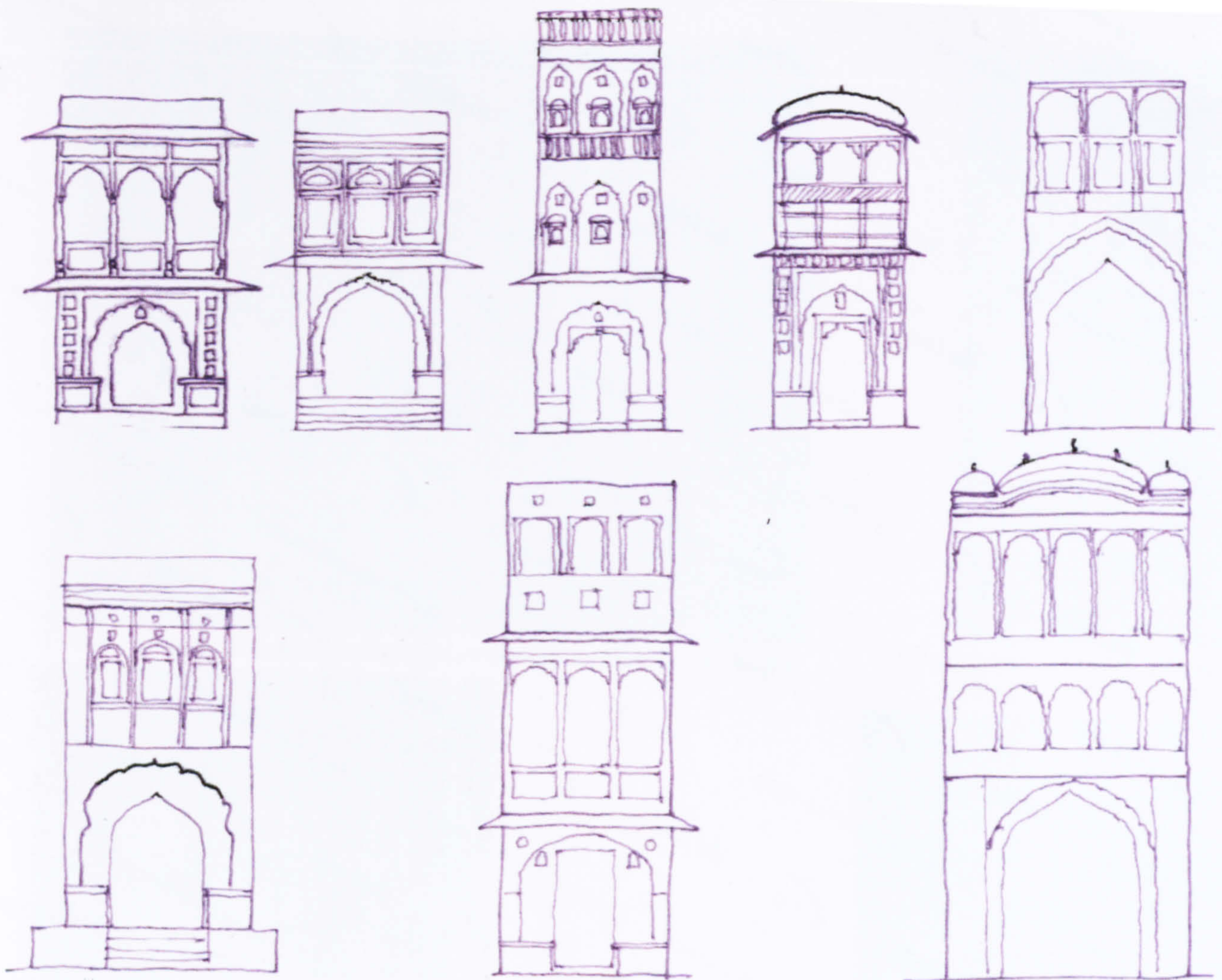
Entrance aedicule, Bhatt Haveli, Jaipur



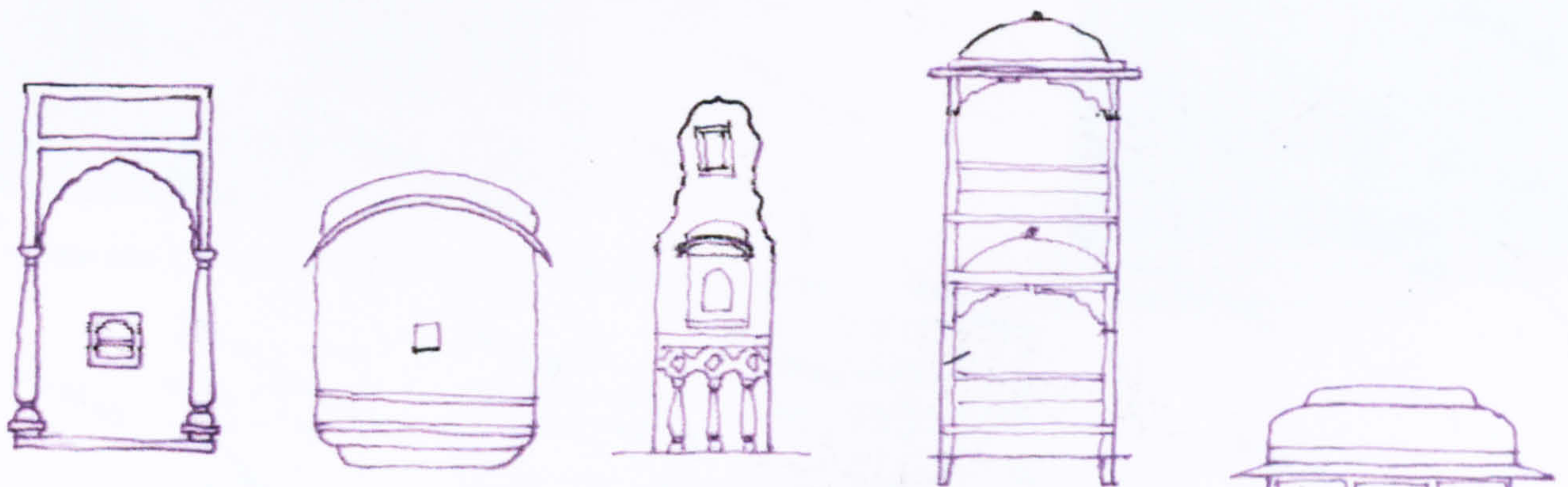
Surface aedicules, Kumawat Usta Haveli, Jaipur

**Figure 5.16b - Aedicules - Dundhar Region**

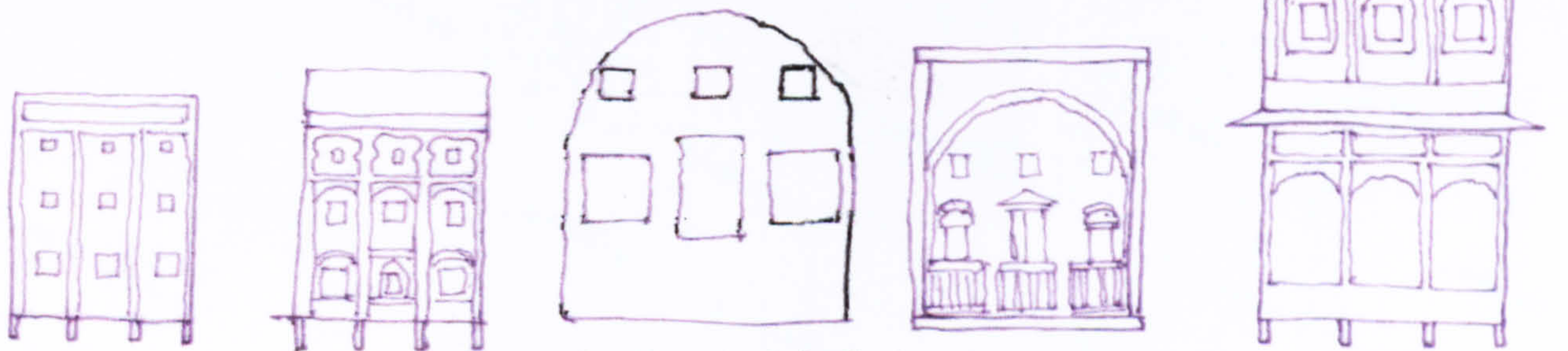




Entrances with Composite (three bay and five bay) Projected Aedicules above



Simple (Single Frame) Aedicules



Composite (three bay) Aedicules

**Figure 5.16c - Entrance and Opening Aedicules - Dundhar Region**





Facade composition with surface aedicules. Goram Ki Haveli, Sirohi



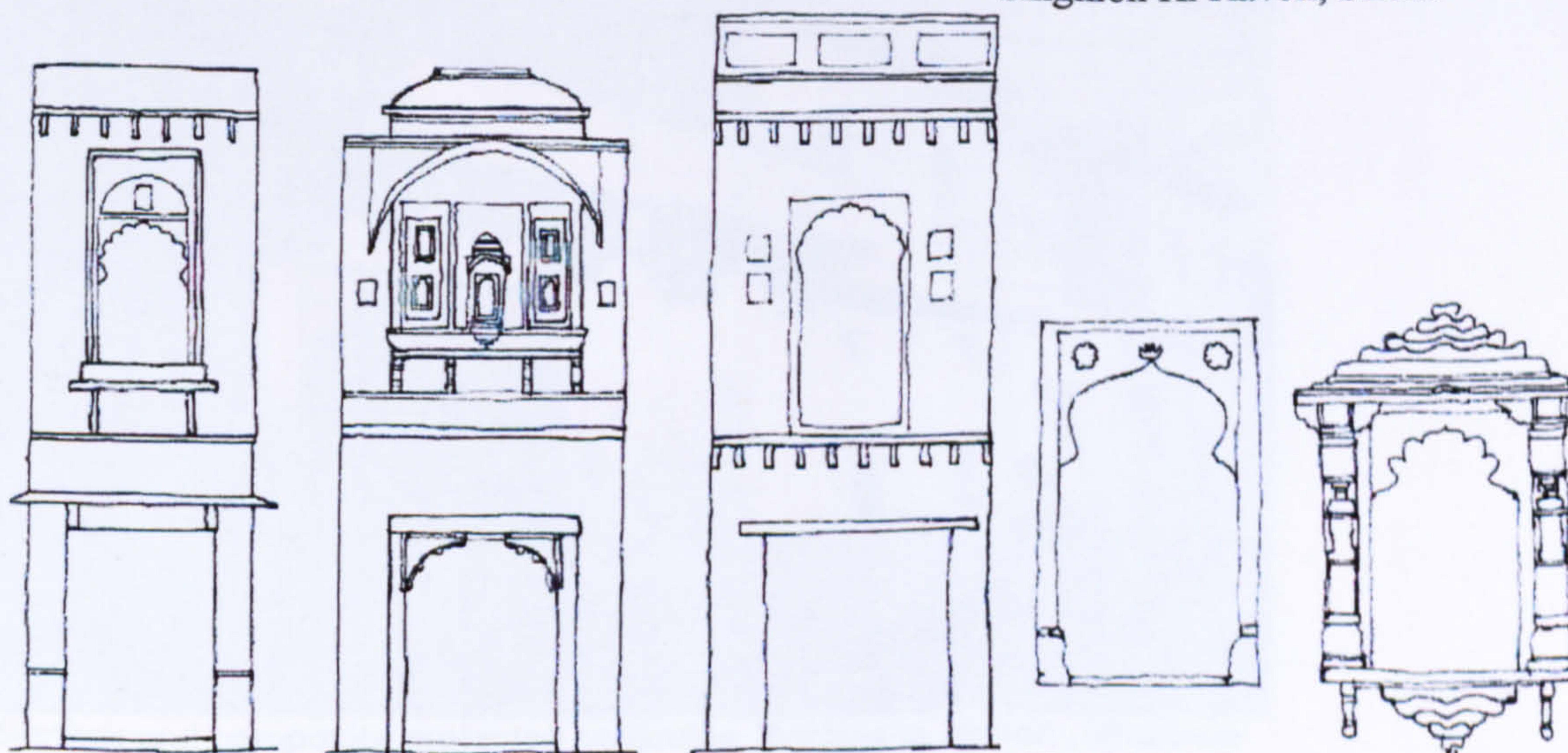
Composite doubly projected aedicules, Haveli, Sirohi



Surface and Composite aedicules. Gosai Ki Haveli, Sirohi



Composite doubly projected aedicules, Singhion Ki Haveli, Sirohi



Entrance and Opening Aedicules

**Figure 5.17 -Façades and Aedicules - Godwad Region**





Simple and composite projected aedicules, Bapna Haveli, Jhalrapatan



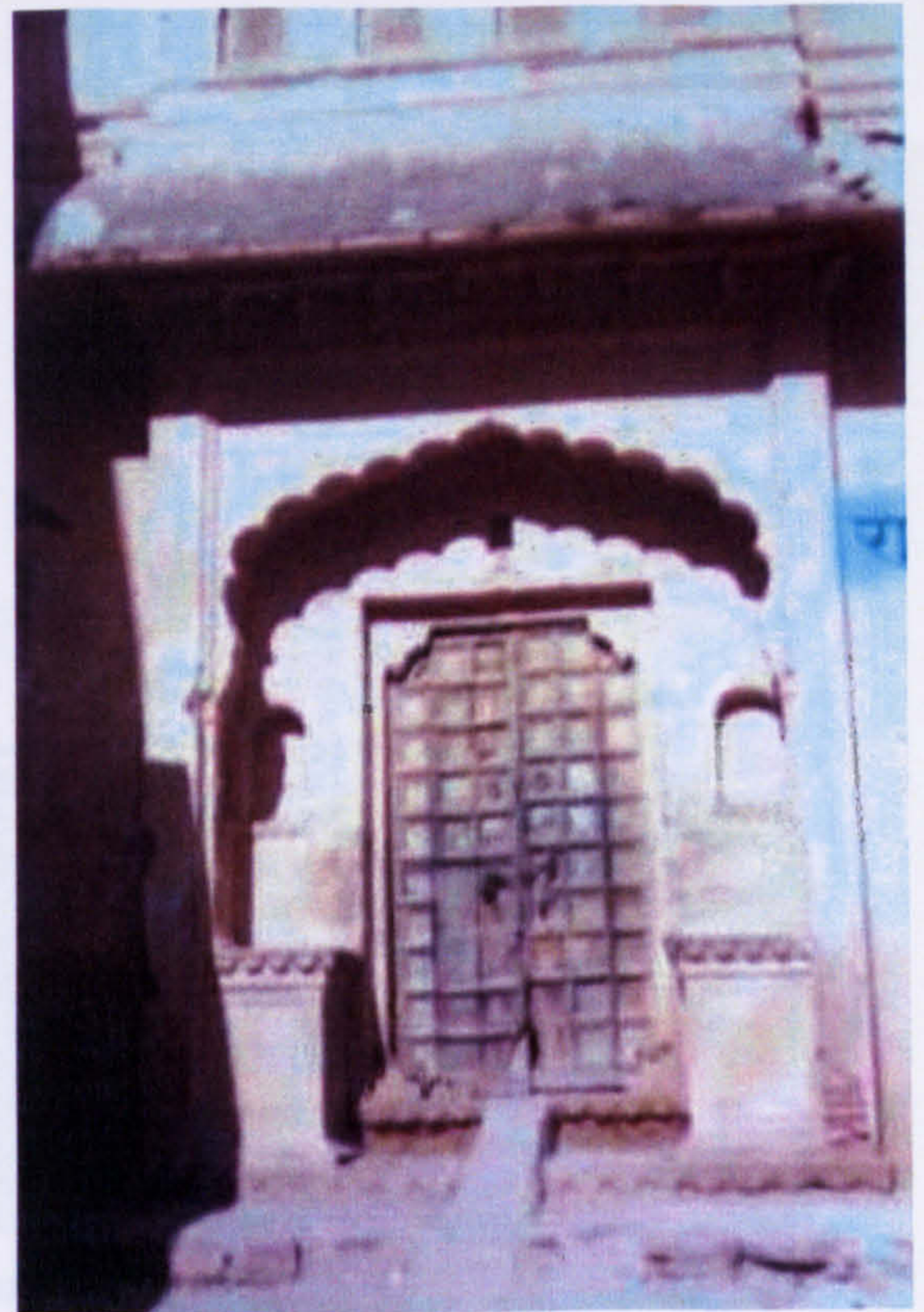
Simple and composite projected aedicules, Maanmal Saraf Haveli, Jhalrapatan



Surface and composite projected aedicules, Bohron ki Haveli , Jhalawar

**Figure 5.18a – Façades – Hadoti Region**





Entrance aedicules in Jhala Haveli, Kota and Bhawani Singh Haveli, Bundi



Haveli, Bundi



Haveli, Jhalrapatan

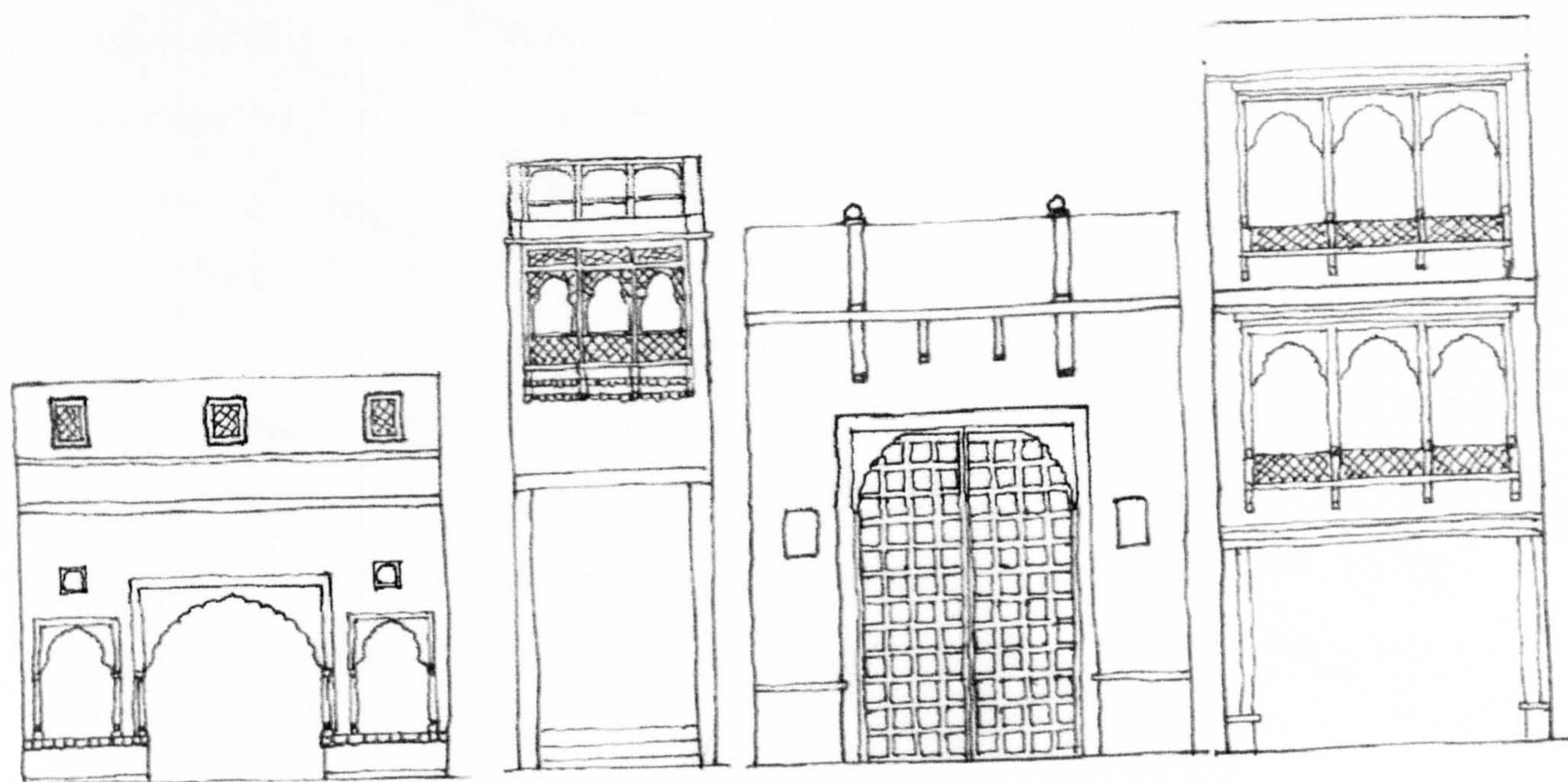
Composite Projected aedicules



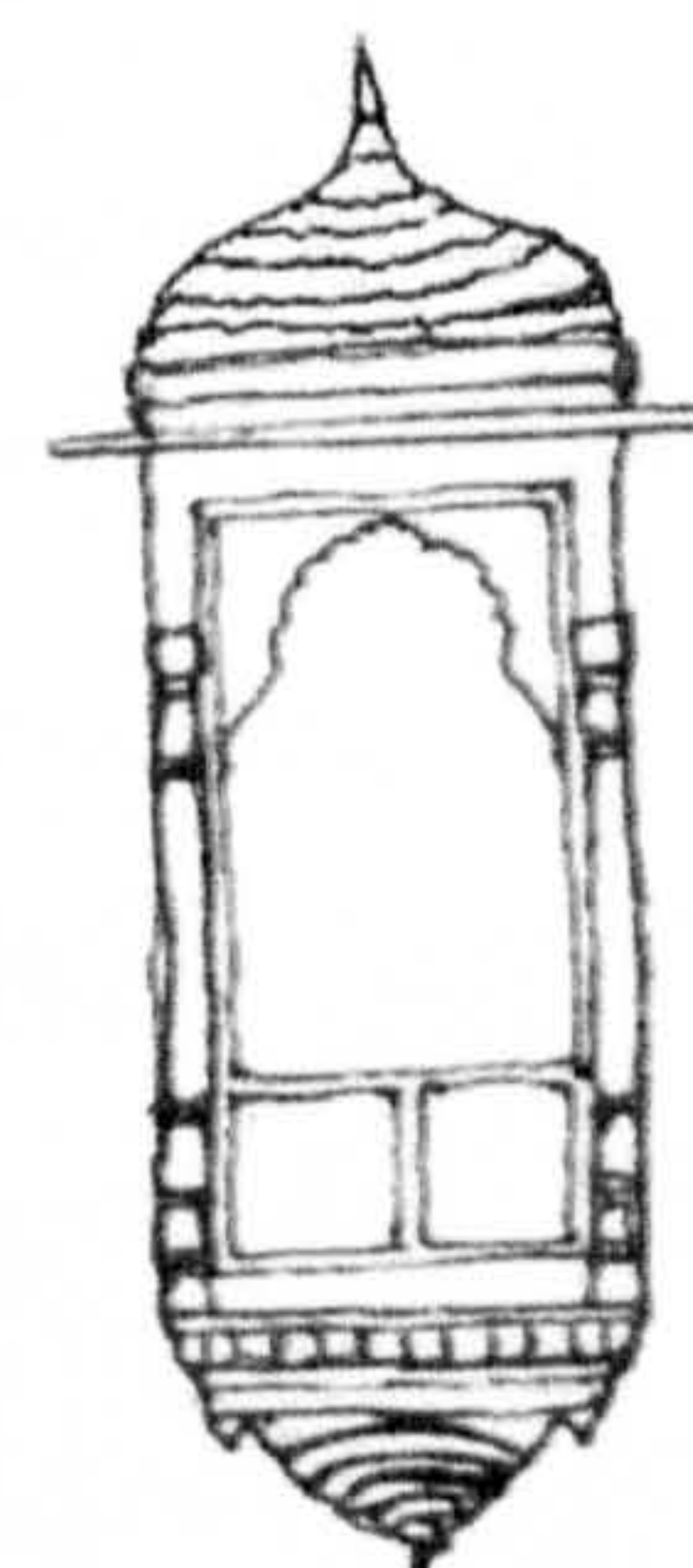
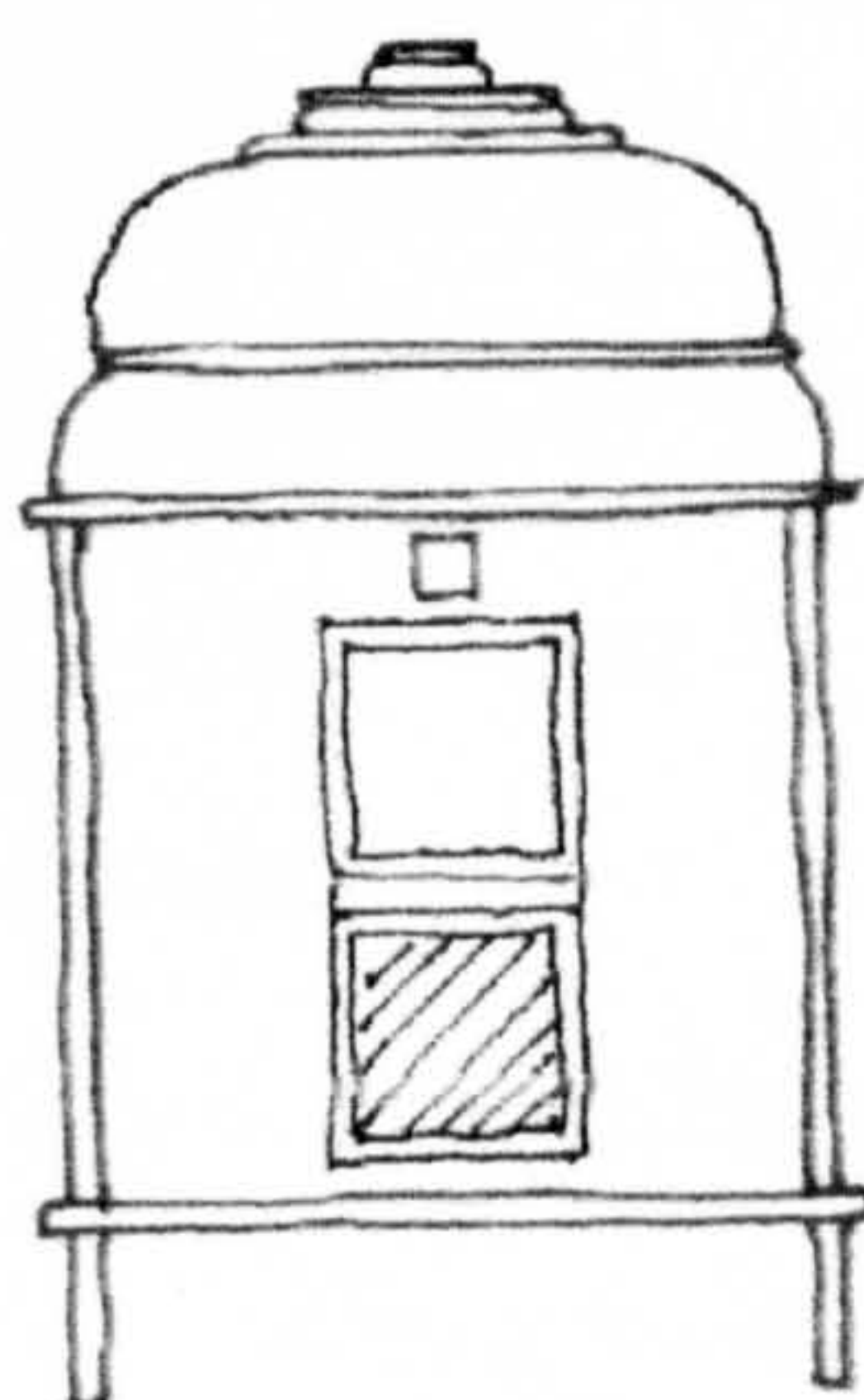
Maanmal Saraf Haveli, Jhalrapatan

**Figure 5.18b - Aedicules - Hadoti Region**

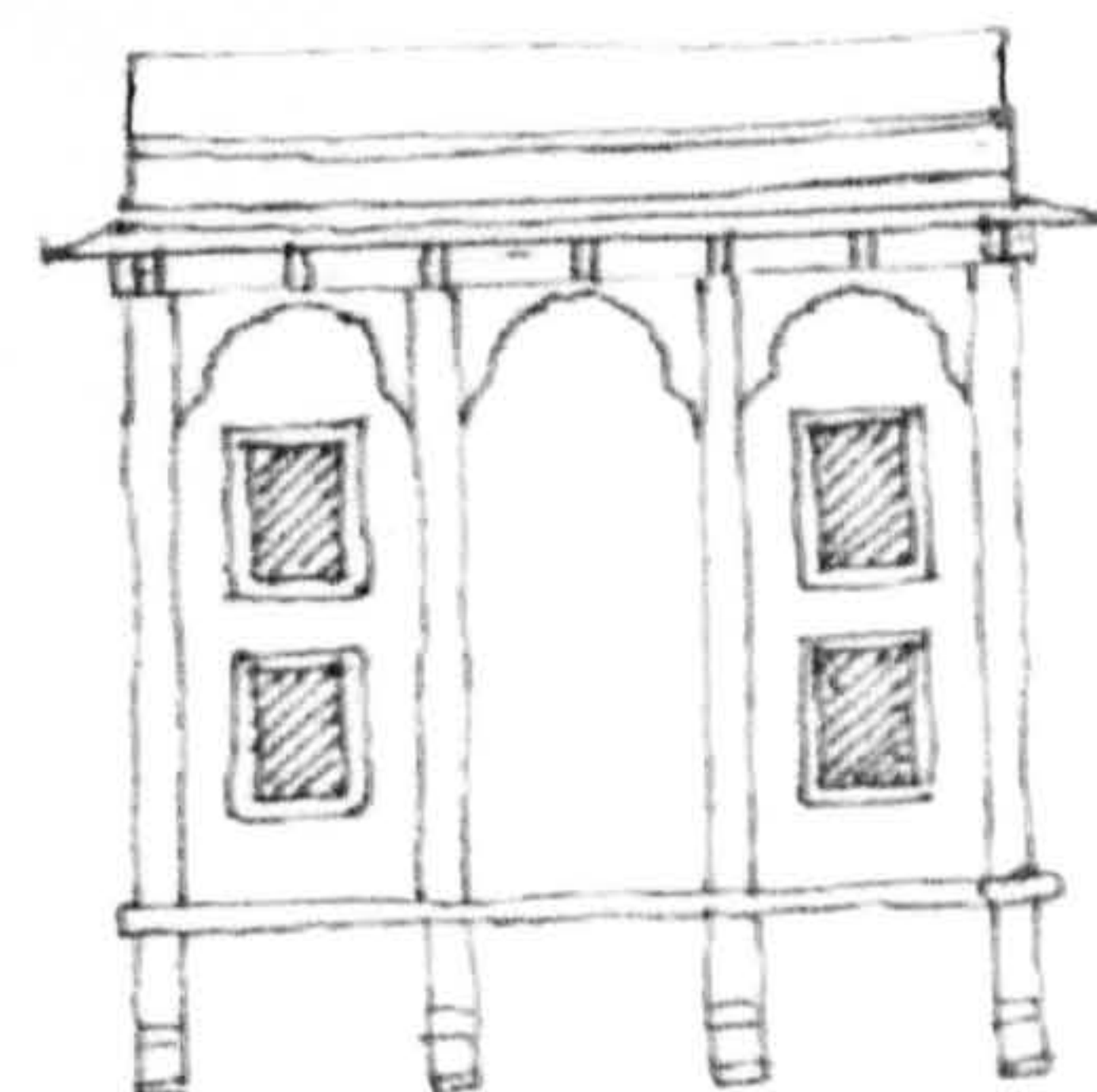
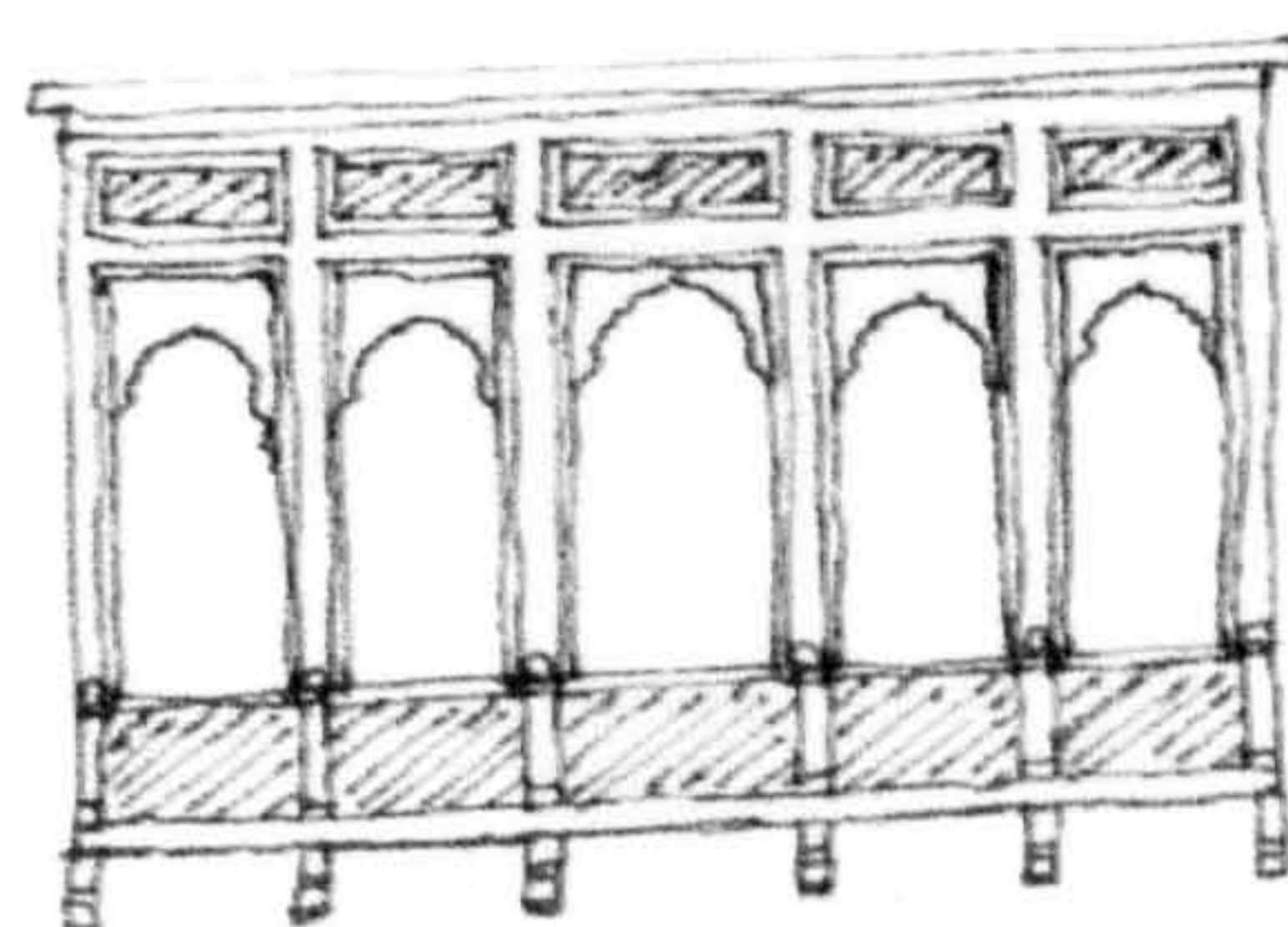
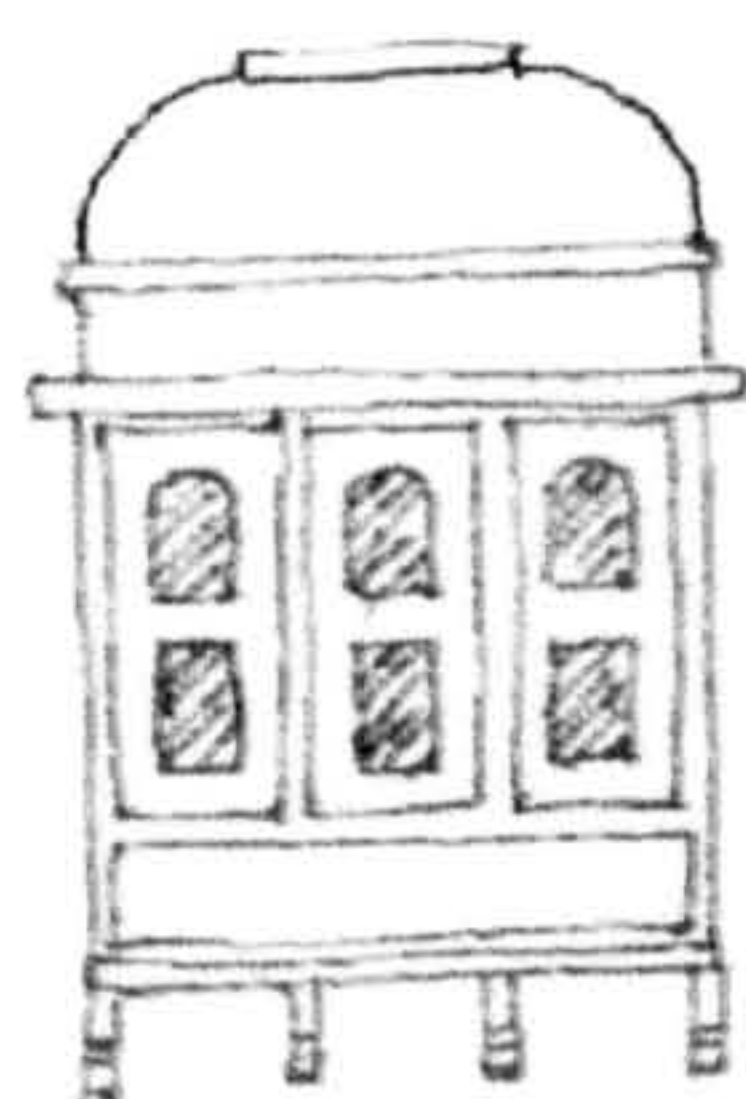
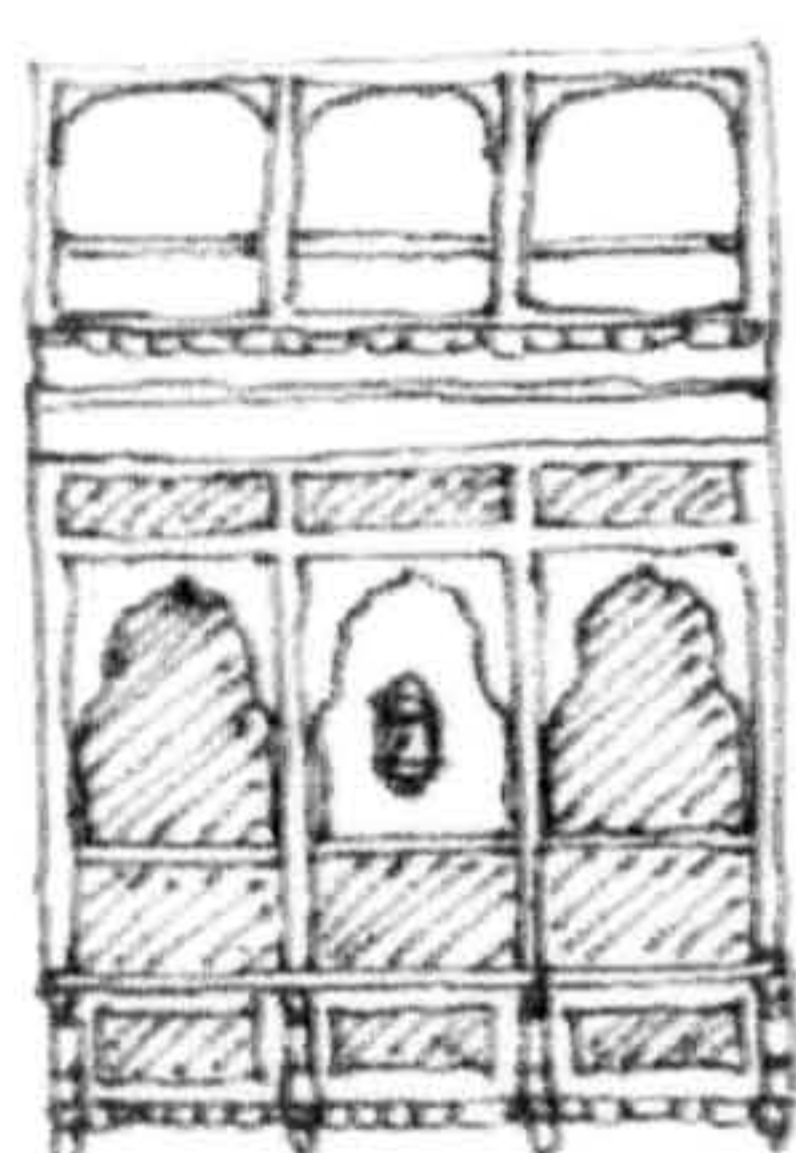




Entrance Aedicules



Simple (Single Frame) Aedicules



Composite (Multiple Frame) Aedicules

Figure 5.18c – Entrance and Opening Aedicules – Hadoti Region



Although the *haveli* façades of Amber (a pre Jaipur settlement) also have both projected and surface aedicules, the composition adheres more to the Rajput fortress type façades with minimal placing of aedicules. The entrances often have composite aedicules with triple bays and are flanked with *gokhas* on either side. They also show double arched openings. In some of the grand *havelis*, five bay composite aedicule with *chatri* roof is also found. In terms of opening styles, the aedicules are arched (cusped, trefoil, pointed and colonial) with rectangular or *chatri* type (*chautar*, *bangaldar* and pediment) framing. In Amber, some pre Islamic trabeated openings with brackets are also observed. The doubly projected aedicules are absent in Dundhar region.

**Godwad Region** (Figure 5.17), specifically Sirohi area show surface aedicules in all façades with projected ones only placed at the entrances (probably as a result of the Sirohi byelaws that no projections are allowed in the processional streets, quoted by a local historian in the town). The *havelis* have asymmetric facades with simple surfaces aedicules as seen in *Goram Ki haveli*, and composite, triple bay, projected ones at entrances. They also have doubly projected aedicules with rectangular and *chatri* forms. Entrances are simply framed with a stone lintel or with stone brackets with projections at top. Arched entrances are rare, although cusped arches are observed in openings.

**Hadoti Region** (Figure 5.18a,b,c) shows the simplest of facades, again the asymmetric kind in Bundi and Kota (Pre Jaipur settlements) and the regular, symmetric kind in Jhalawar and Jhlapatan (Post Jaipur settlements). The Patwa *haveli* in Jhalrapatan shows particular influence from Jaisalmer as the central *jharokha* in yellow sandstone façade was carved and brought from Jaisalmer.



The façades of Hadoti area show both simple and composite projected aedicules with rectangular and *chatri* frames. Composite aediucles have a triple bay or five bay frame. Entrances are of two types, either arched ones with *gokhas* or simple trabeated ones as observed in the *havelis* of Jhalrapatan.

**The Marwar Region** (Figure 5.19a,b,c and d) presents the most complex *haveli* façades and aedicules as they excelled in stone carving and ornamentation. Both Rajput style and Marwari style are present in the region but the second one is more dominant. The façades are framed with simple and composite surface, projected and doubly projected aedicules. Composite aedicules have a triple or five bay frame with intricate *jali* work. Aedicular frames have *chatri* roof in most cases. An example of the Patwa *haveli* facade is presented earlier in Figure 5.11. The aediucles are distinct in the regions with pointed *chatri* ends. Another distinct variation in the façades is the use of a false row of brackets. The entrances are often through an outside platform or '*otta*' marked with a row of columns. The central bay in the façade marks the entrance, which could be trabeated or arched. A grand arched entrance gate is only found in Rajput and Muslim *havelis* such as Pal Thakur *haveli* and Bade Miya *haveli*, Jodhpur and Nachna *haveli*, Jaisalmer which are designed on the Rajput pattern.

**Merwara Region** (Figure 5.20 a,b,c) has an influence of Dundhar and Marwar region. The façades are framed and more aedicular with simple composite, projected, doubly projected aedicules. *Jali* and stucco work in lime plaster is observed. Aedicules have rectangular or *chatri* frames with arched openings. Composite aedicules with triple, five and seven bay frames are observed. Grand entrances with arched gates are observed in the Mewara *havelis*. These often have complex, composite (five bay frame) projected aedicules on top.





Placement of simple and composite aedicules in the Rajput pattern. Pal Thakur Haveli, Jodhpur



Side View

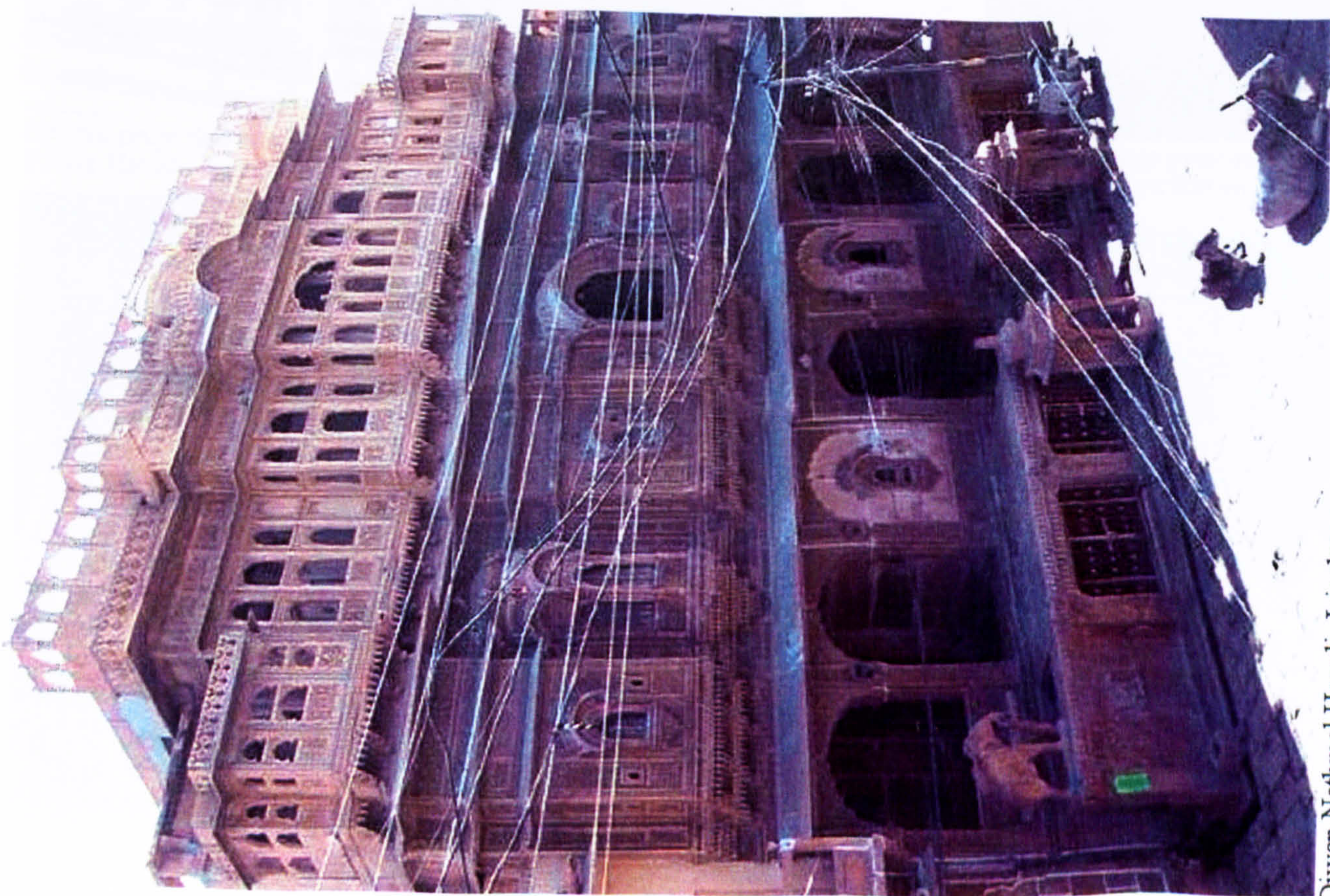


Front View

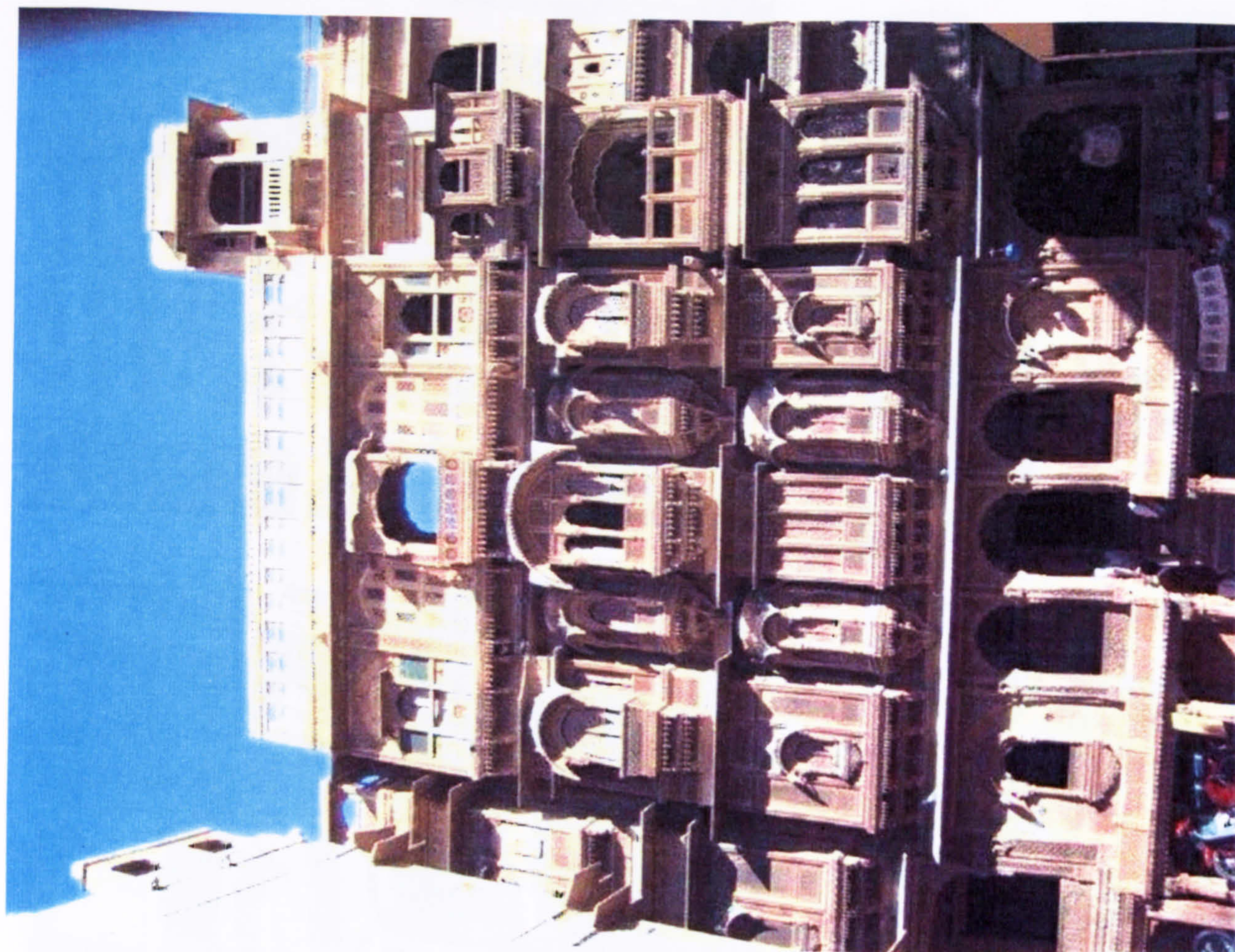
Simple and composite aedicules that are projected and doubly projected in a framed composition. Increased aedicular density in the Marwari pattern. Roshanlal Ki Haveli, Pokhran

**Figure 5.19a - Façades - Marwar Region**





Diwan Nathmal Haveli, Jaisalmer



Patwon ki Haveli, Jaisalmer

**Figure 5.19b - Façades - Marwar Region**





Pal Thakur Haveli,  
Jodhpur



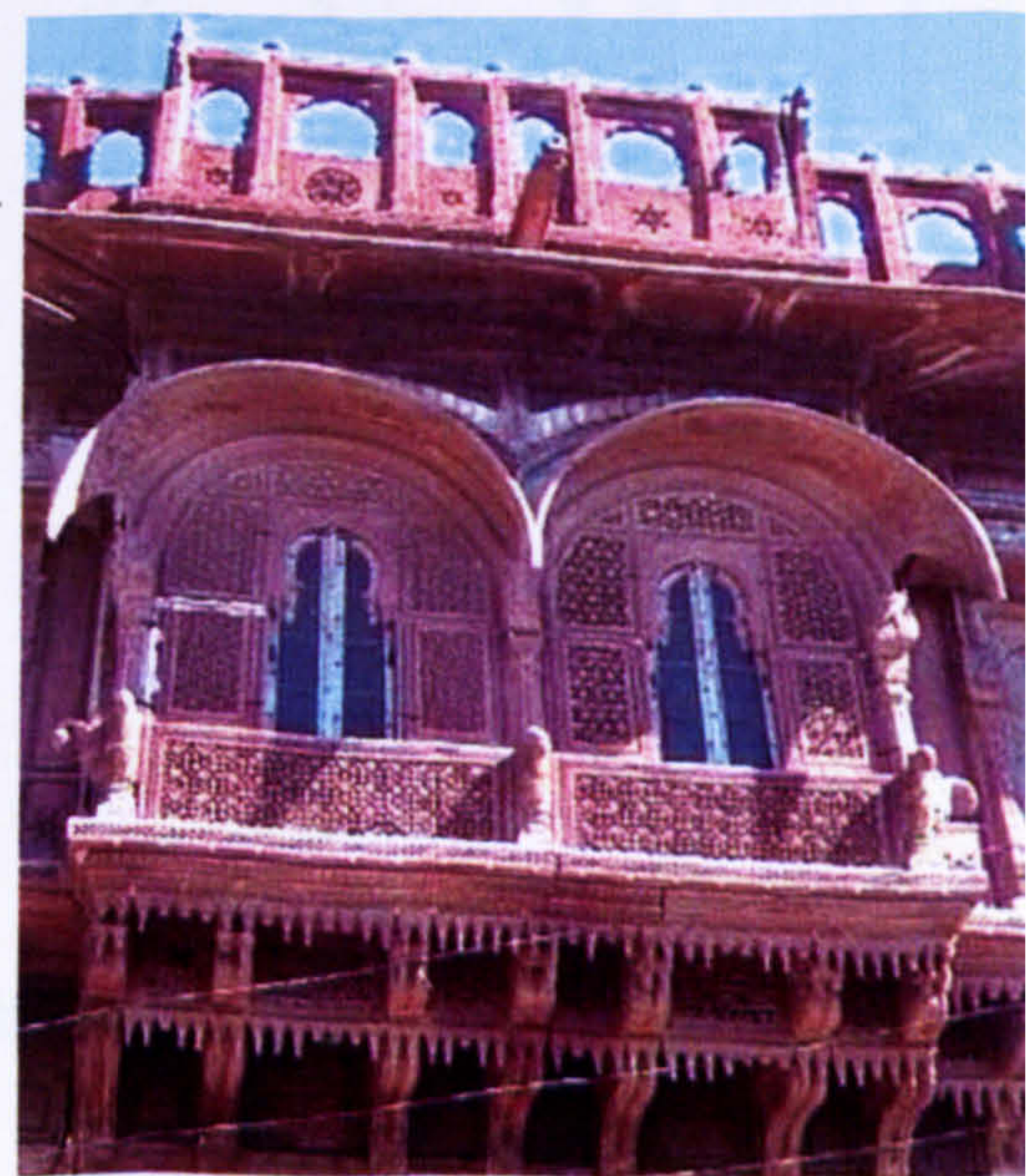
Patwa Haveli,  
Jaisalmer



Simple projected and doubly projected aedicules.  
Patwa Haveli, Jaisalmer



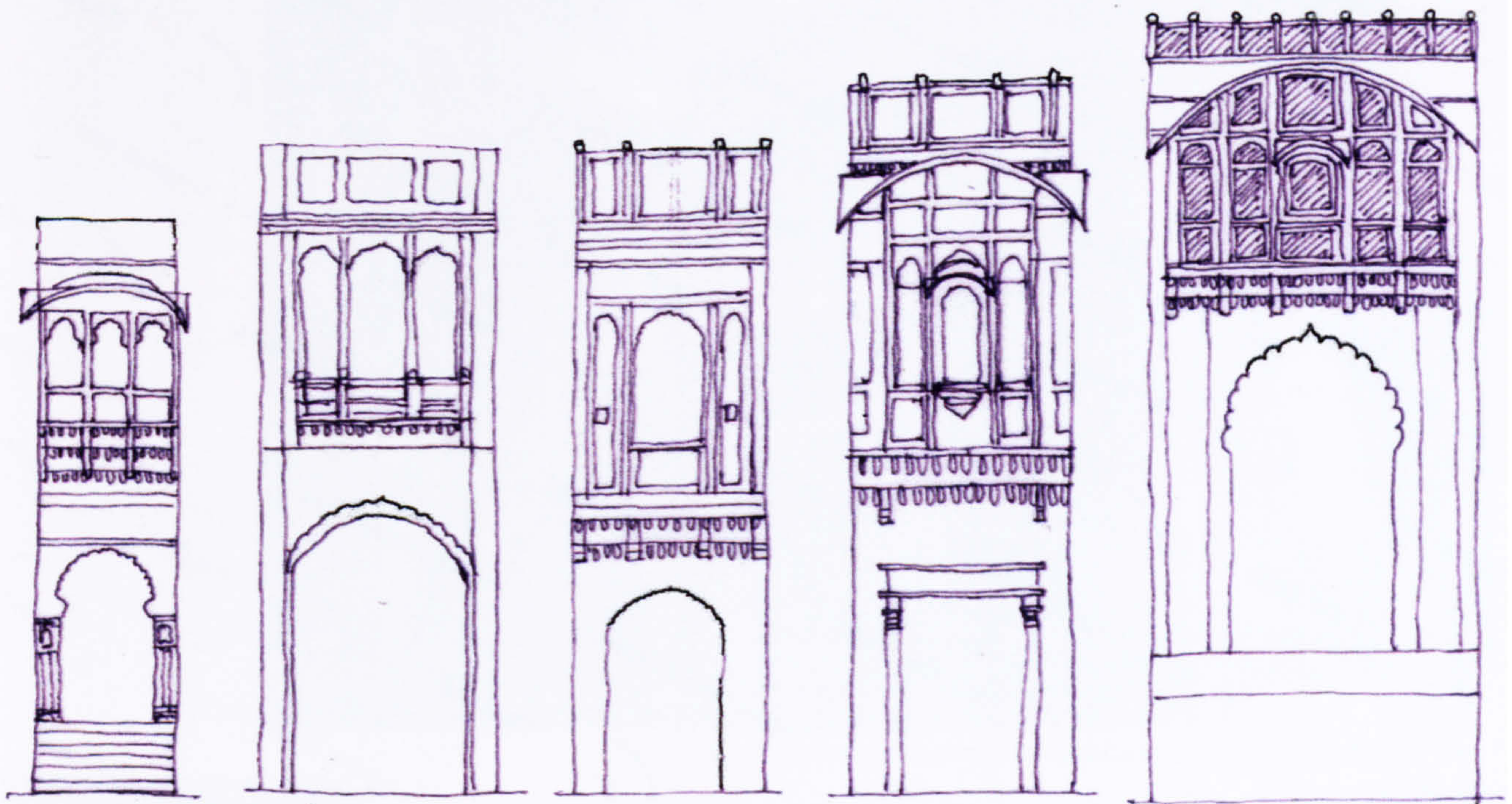
Composite projected aedicule  
Bade Miya Haveli, Jodhpur



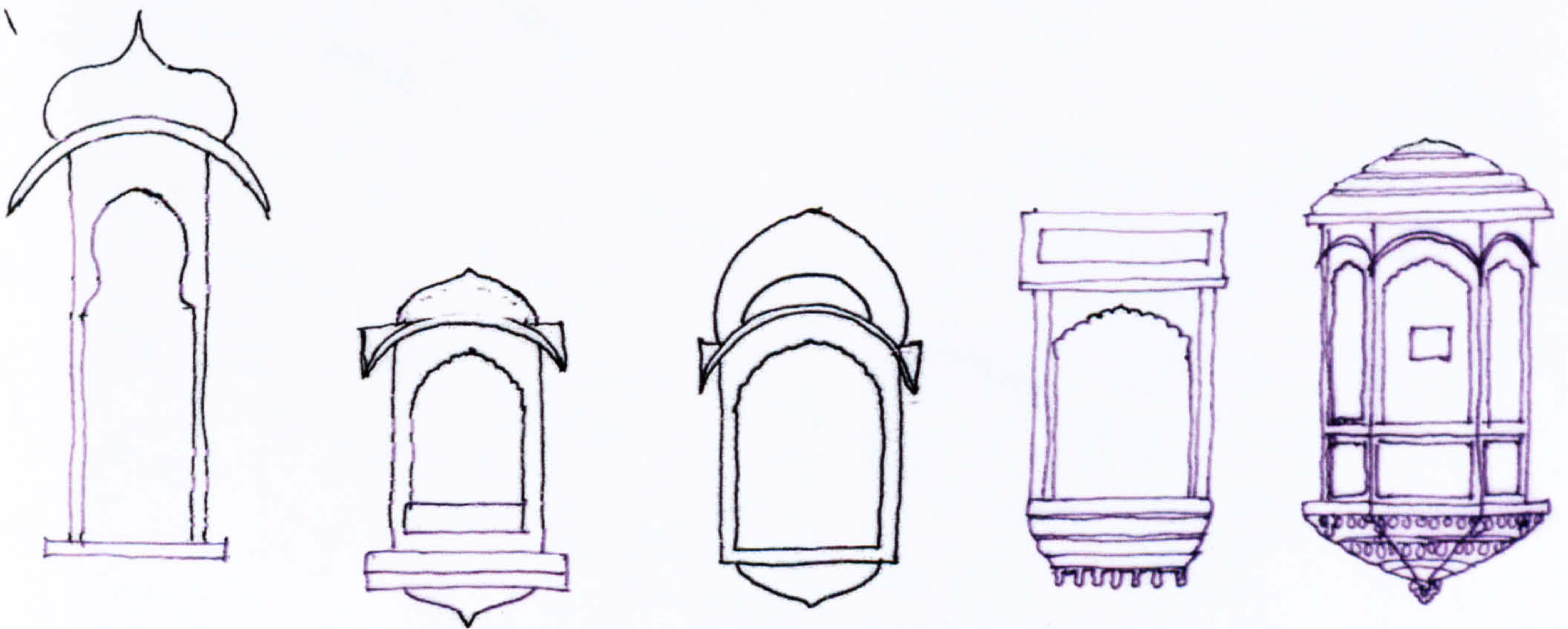
Composite doubly projected aedicules. Roshanlal ki Haveli, Pokhran

**Figure 5.19c - Aedicules - Marwar Region**





Entrance Aedicules



Opening Aedicules

**Figure 5.19 d - Entrance and Opening Aedicules - Marwar Region**

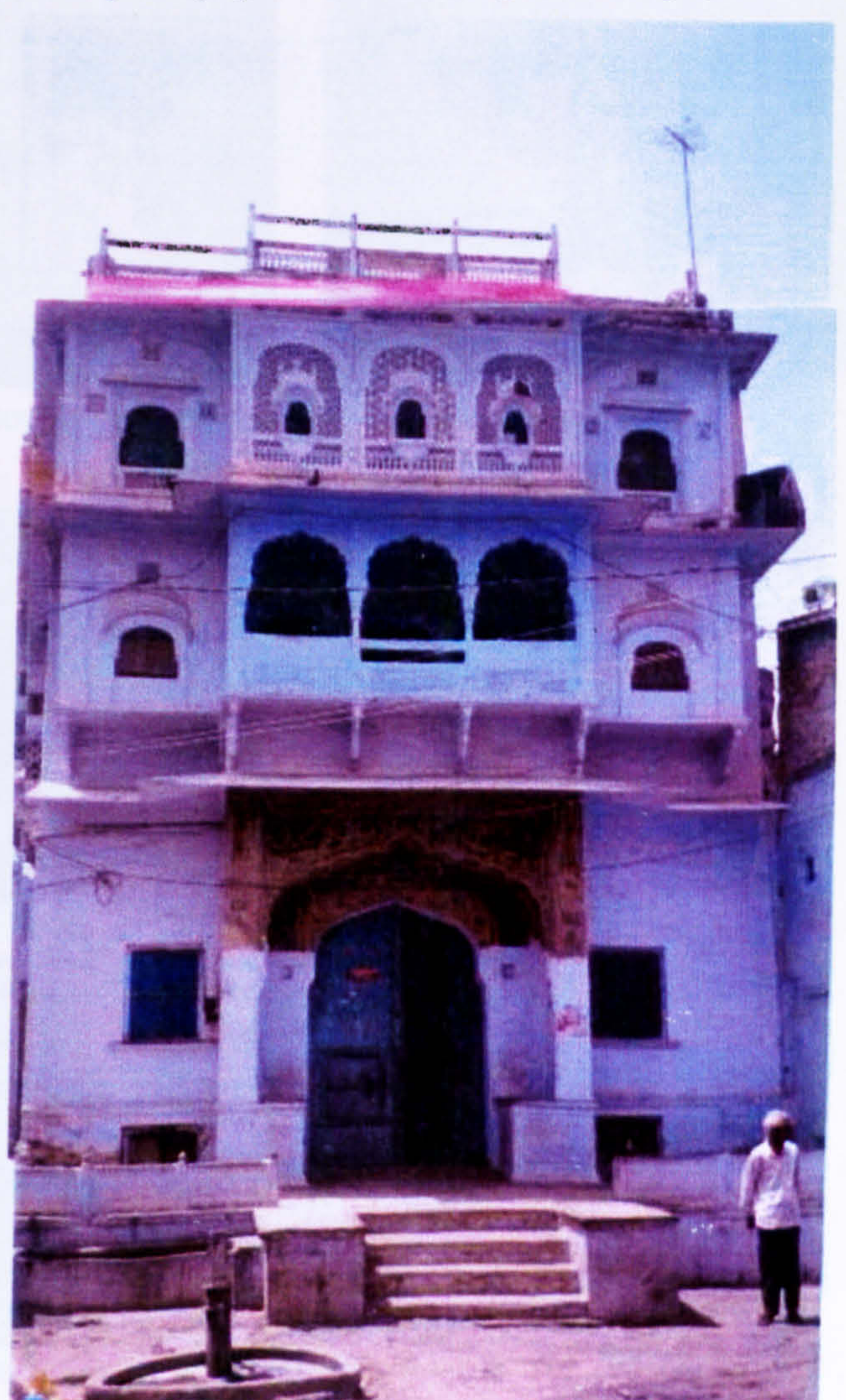




Composition of composite projected aedicules, Agarwal Temple, Pushkar



Bohra Temple, Pushkar



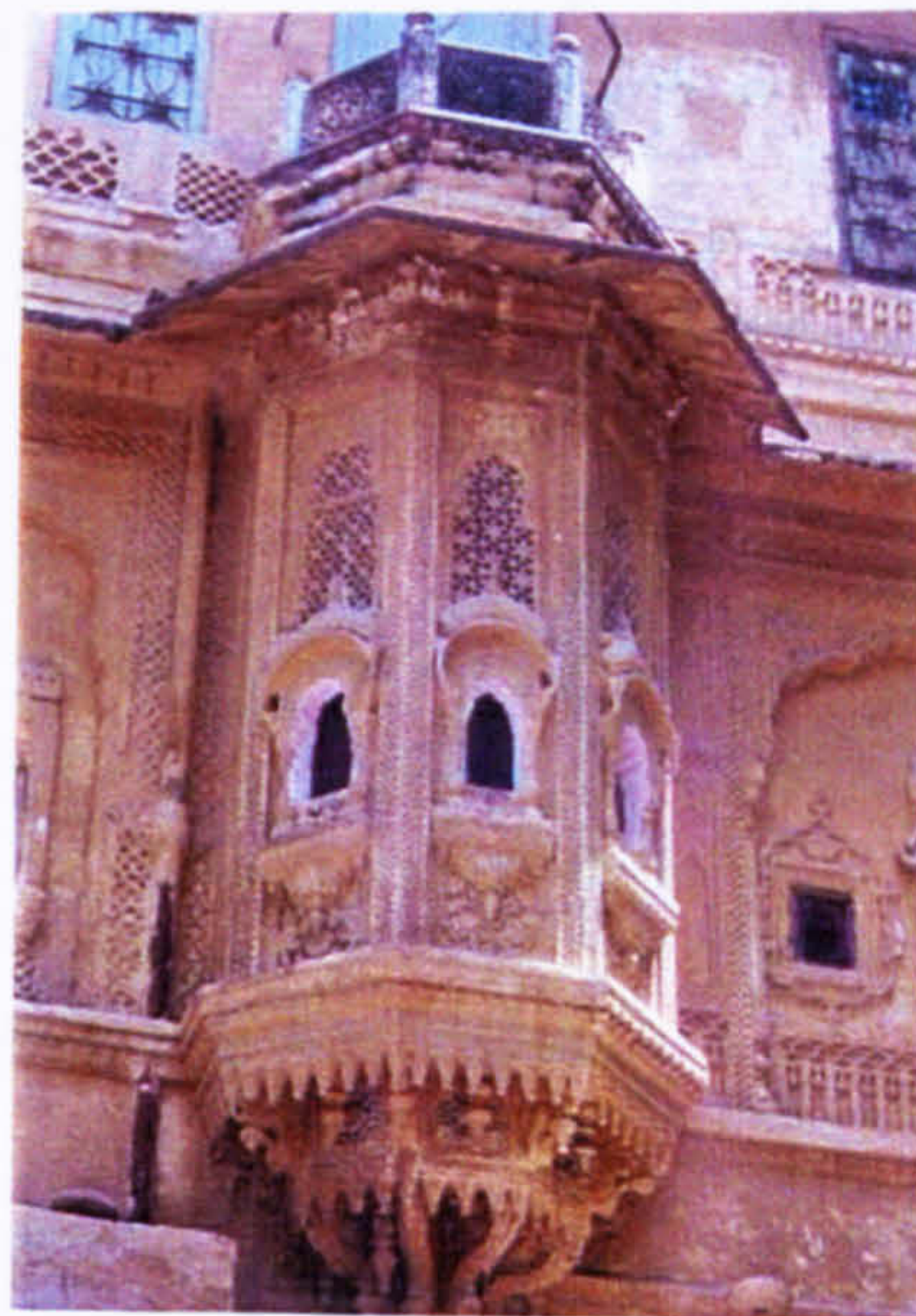
Lodha Haveli, Kishangarh

**Figure 5.20a - Façades - Merwara Region**





Simple and composite projected aedicules, Agarwal Haveli, Kishangarh



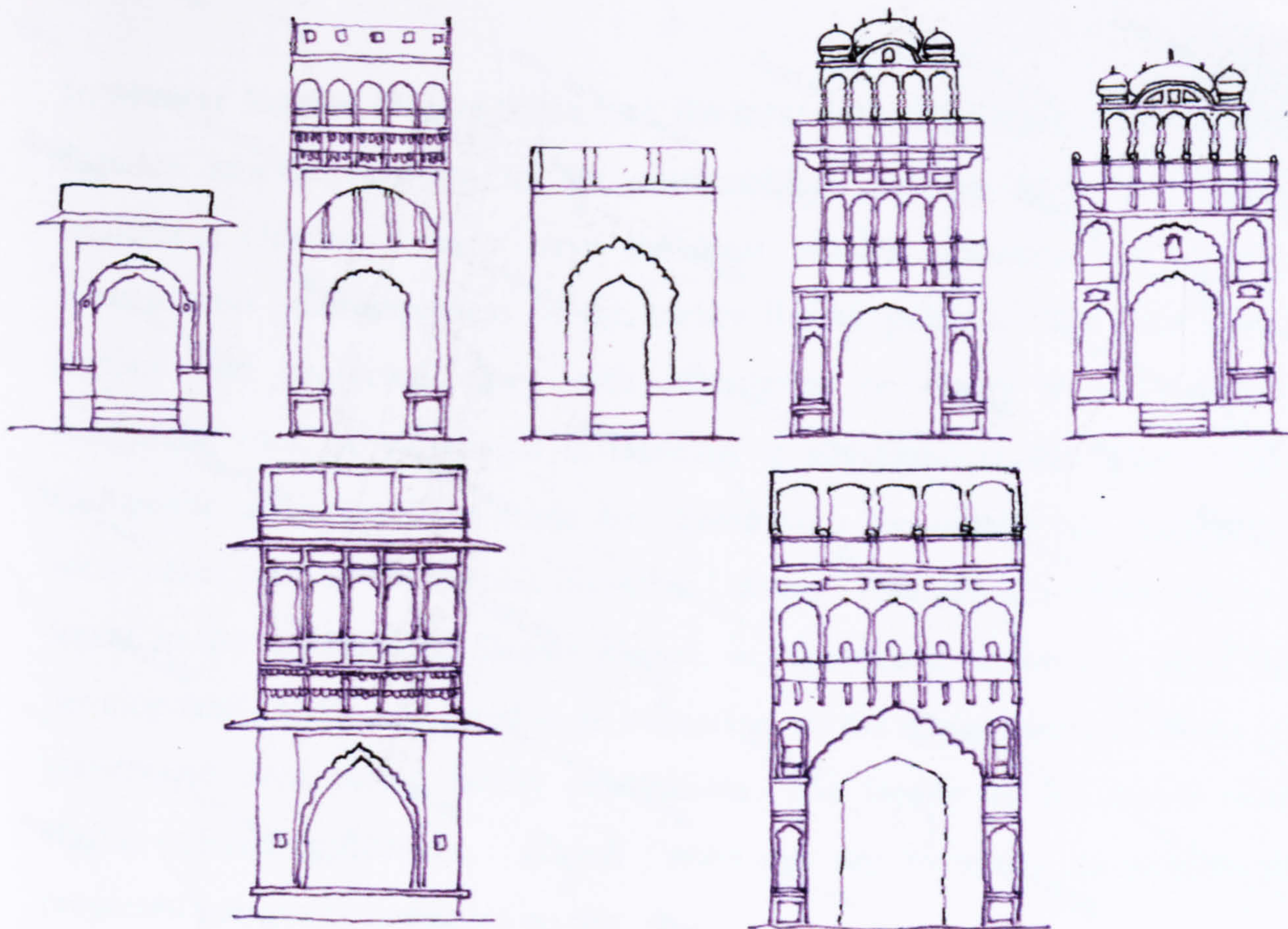
Simple and Composite projected and doubly projected aedicules, Patua Haveli, Ajmer



Composite, doubly projected aedicules, Patwa Haveli, Ajmer

**Figure 5.20 b - Aedicules - Merwara Region**

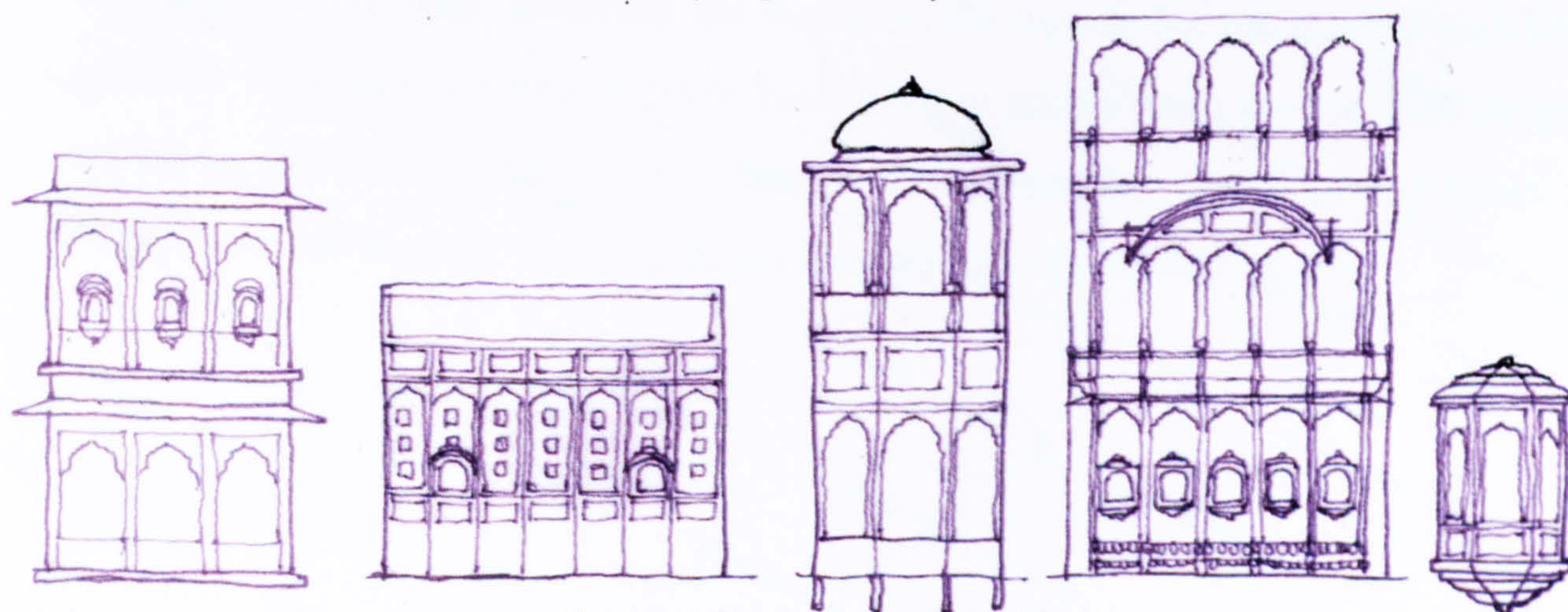




Entrance Aedicules



Simple (Single Frame) Aedicules



Composite (Multiple Frame) Aedicules

**Figure 5.20c - Aedicules - Merwara Region**



In **Mewar Region** (Figure 5.21a,b,c), the most authentic Rajput zone, the *haveli* façades strictly conform to the asymmetrical, fortress kind with minimal aedicules. Udaipur *havelis* have the least Mughal influence and retain the unstructured amorphousness of the earlier Rajput palaces.<sup>6</sup> The aedicules are surface and projected types with rectangular or *chatri* framing. But the *bangaldar* roof, so prominent in Dundhar is not found in the Mewar region. Composite aedicules have triple bay frame with the central bay staggered in some cases such as the Purohit *Haveli* in Udaipur. The only Marwari style *haveli* found in the fieldwork is Sharda *Haveli*, in Nimbahera, which is a much later development (1850 A.D.) and is an exception, as the upper floors are made as a guesthouse used during family celebrations. The façade of this *haveli* shows strong colonial influences. *Haveli* entrances are trabeated or arched with projected composite aediucles on top.

**Mewat- Brij Region** (Figure 5.22a,b) shows symmetric, balanced *haveli* façades in the Jaipur and post Jaipur Marwari pattern, also following the Islamic finites. A distinct feature of these façades is the extra usage of brackets in the projections, a possible outcome of the stone size available in the area. Both simple and composite aedicules are found on the façade but the doubly projected aedicule is absent. Entrances often have double arches with cusped and pointed arches in most cases. Entrance aediucles have triple bay frame with *gokhas* on the ground and three or five bay composite aedicule projected on top.

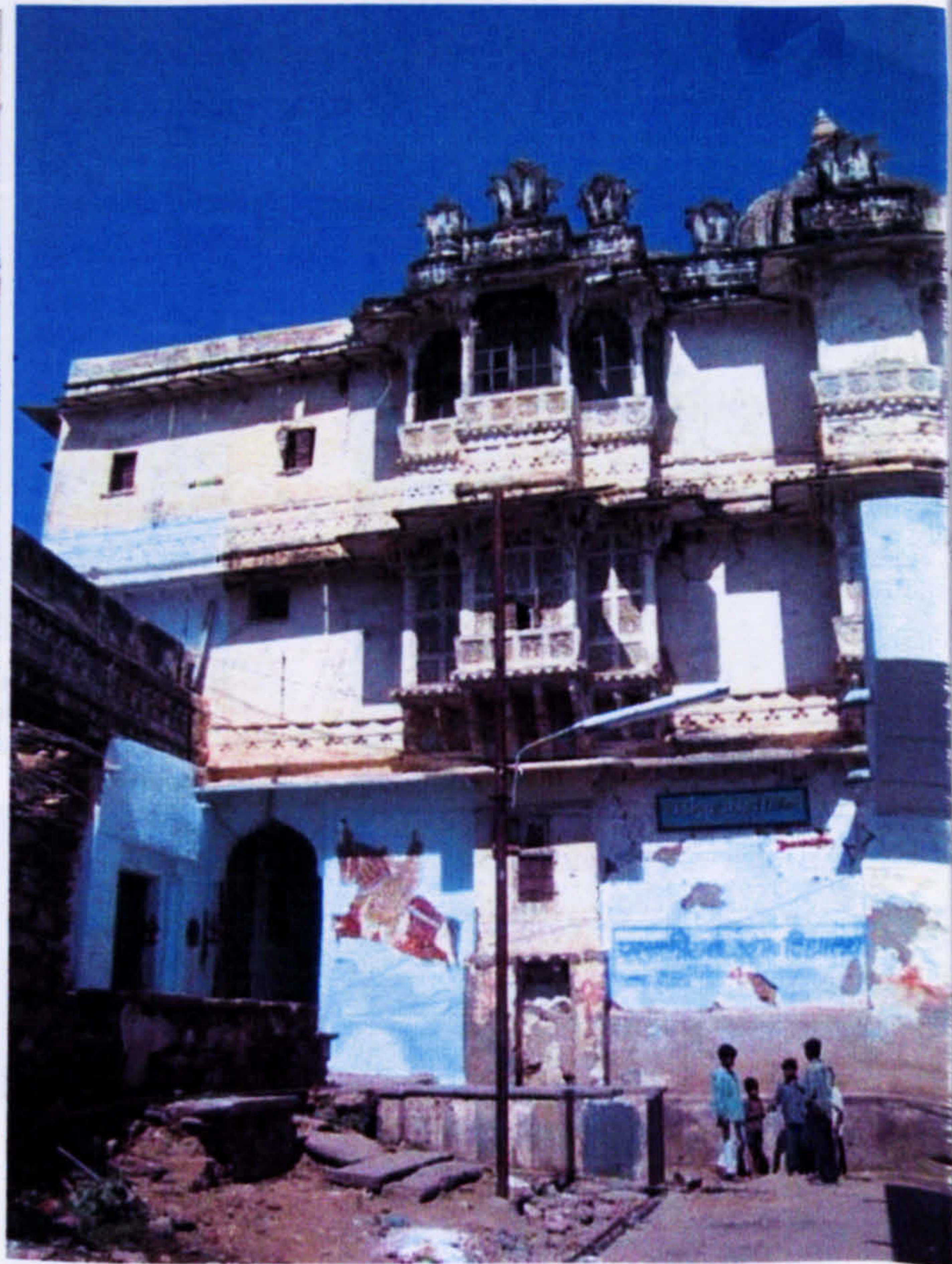
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<sup>6</sup> Randhawa, T.S., 1999, p.36

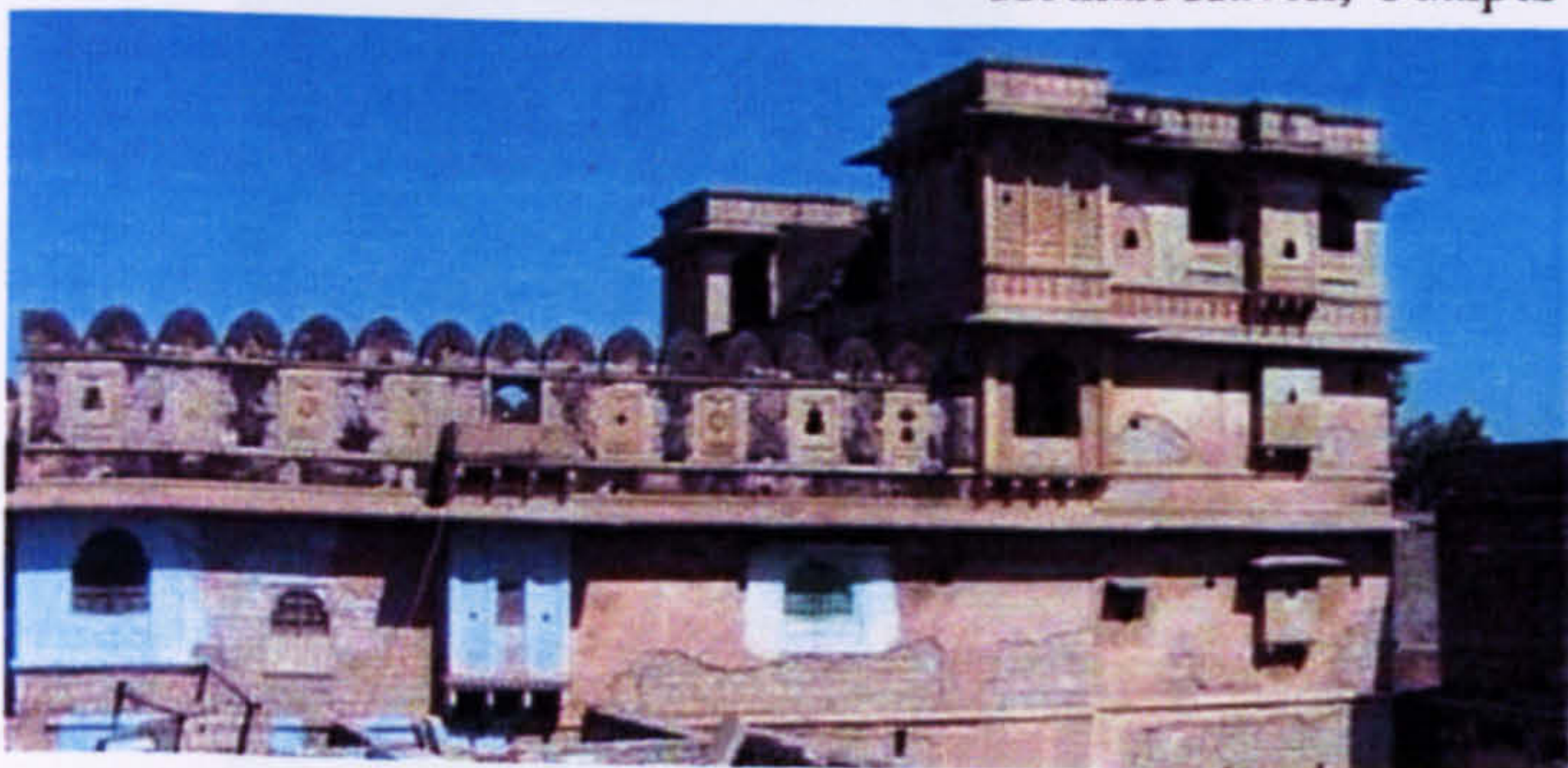




Kothari Haveli, Udaipur



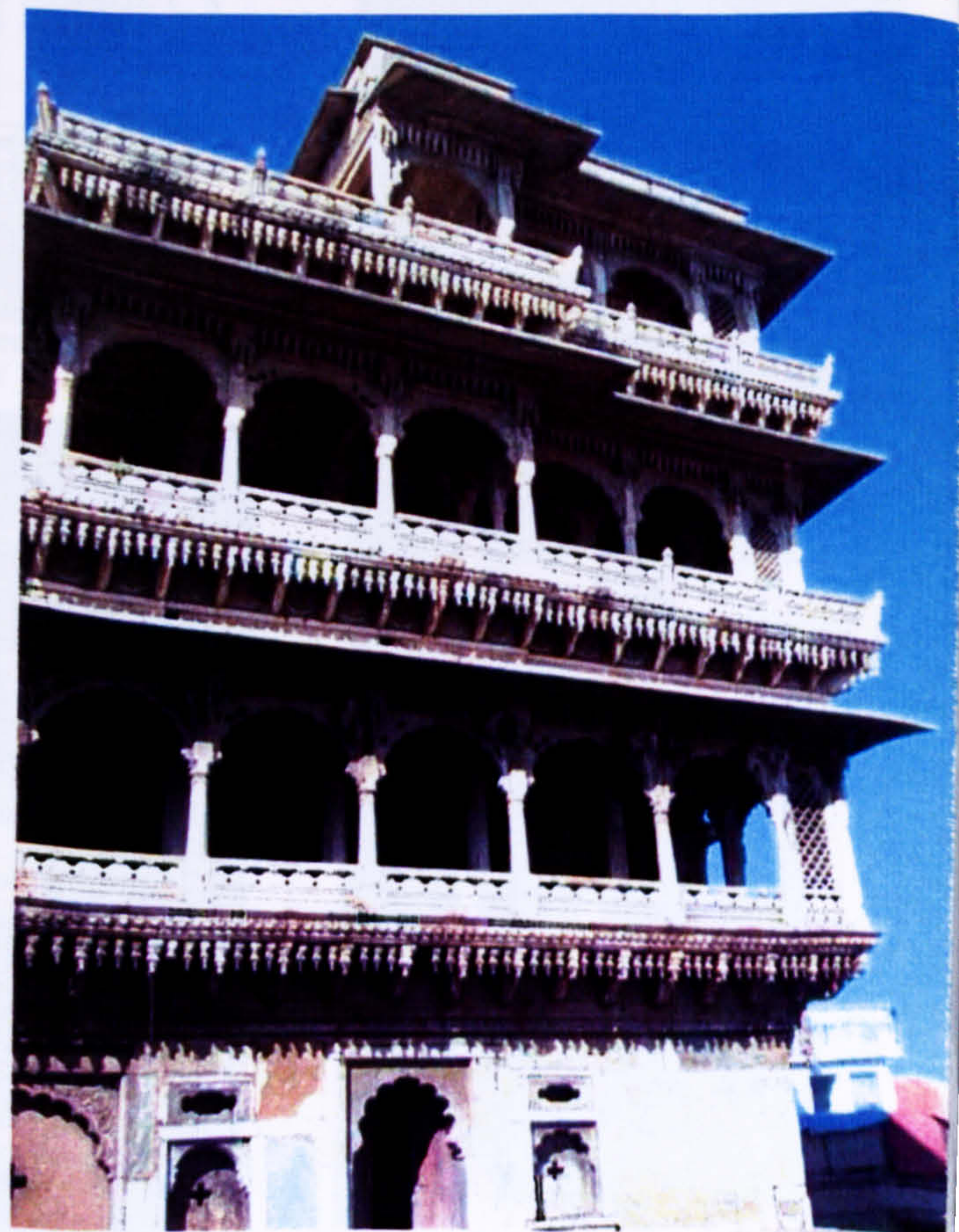
Composite aediucles with *Chatri* roof, Purohit Haveli, Udaipur



Naron Ki Haveli, Nimbahera



Composite projected aediucles with colnial arches, Sharda Haveli. Nimbahera



**Figure 5.21a - Façades - Mewar Region**

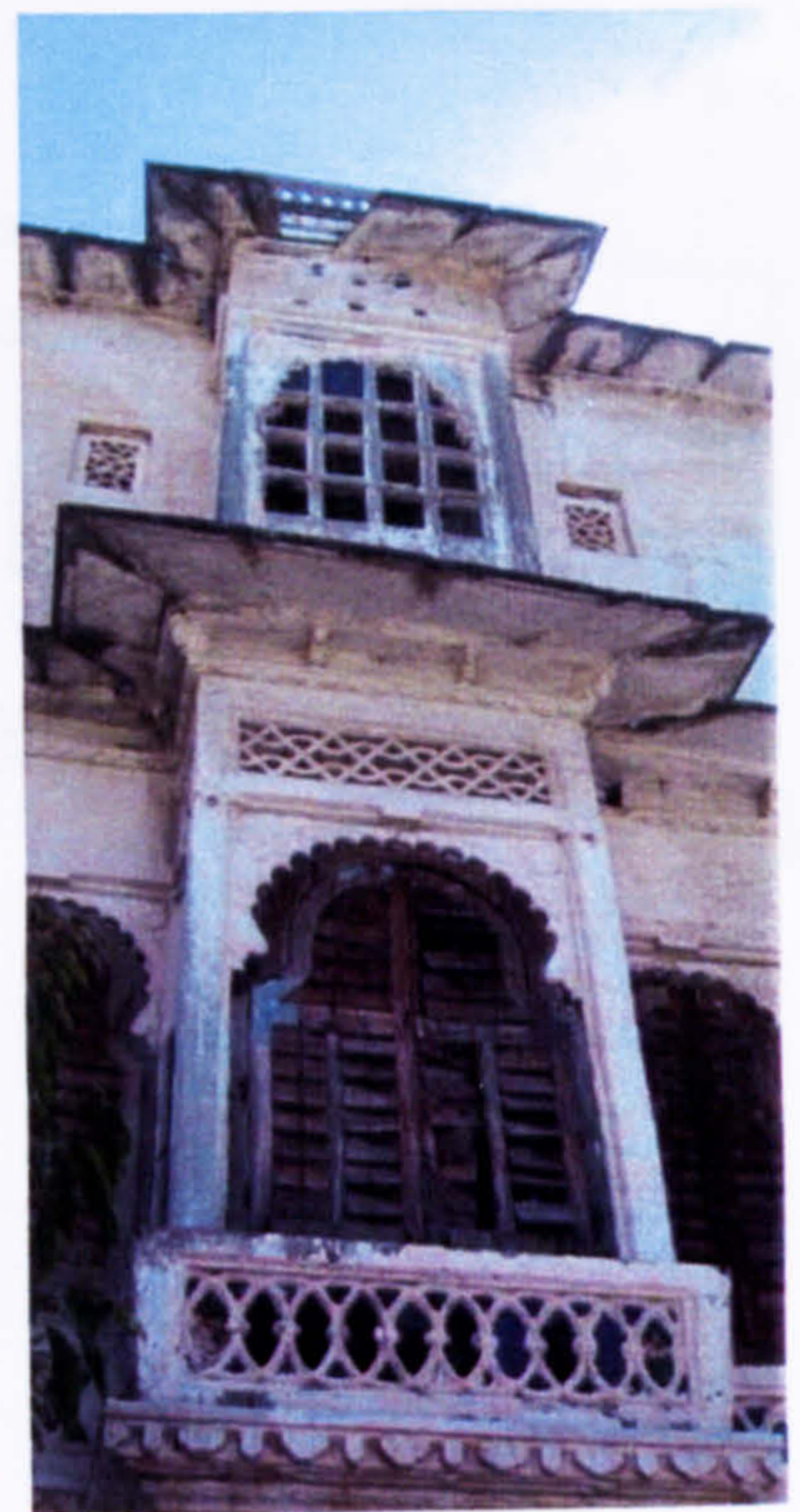




Entrance, Amet Haveli, Udaipur



Simple surface and Projected aedicules, Bagor Ki Haveli, Udaipur



Simple Projected aedicule, Purohit Haveli, Udaipur



Entrance aedicule, Naron Ki Haveli, Nimbahera



Composite Projected aedicule, Jeevan Niwas, Udaipur



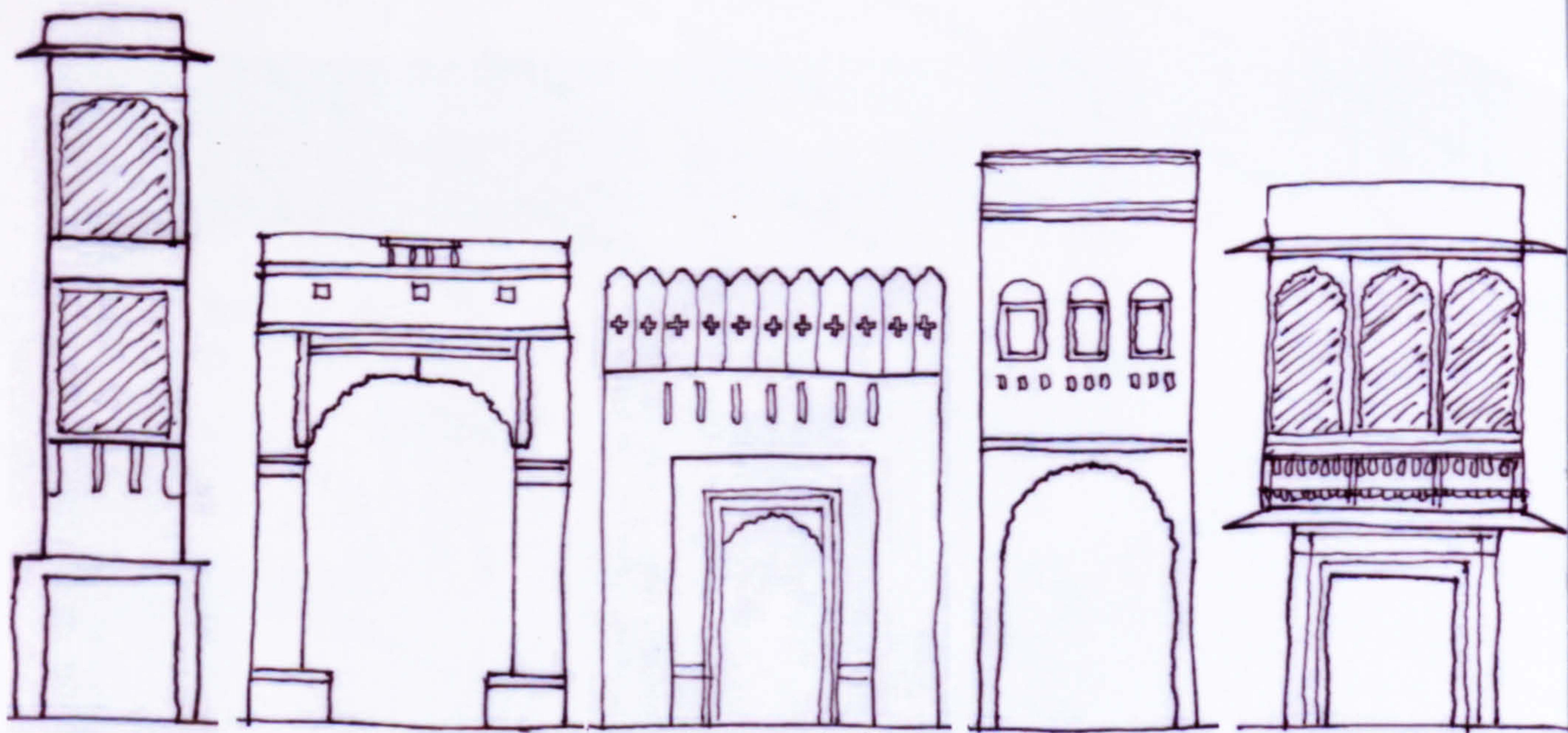
Composite Projected aedicule, Naron Ki Haveli, Nimbahera



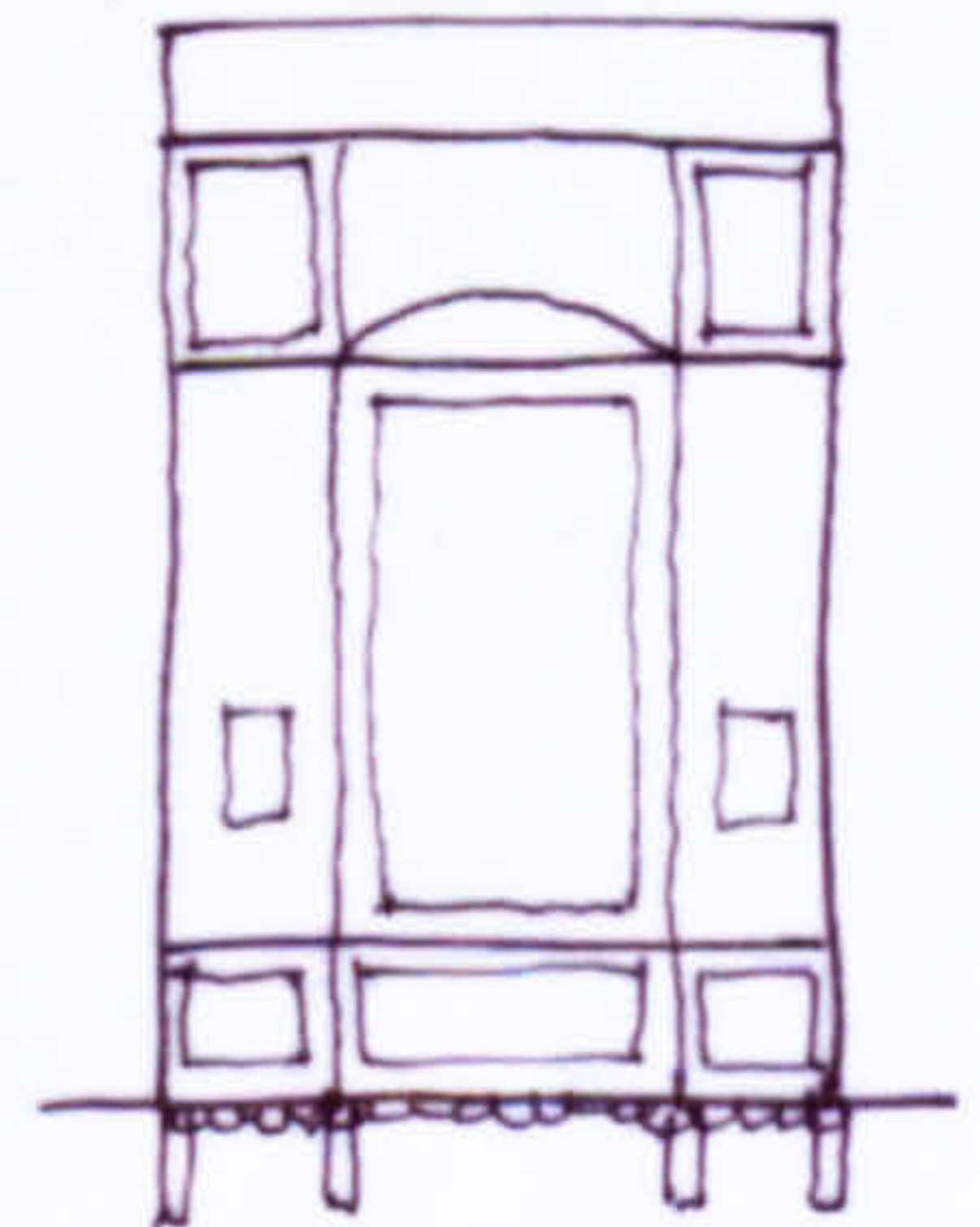
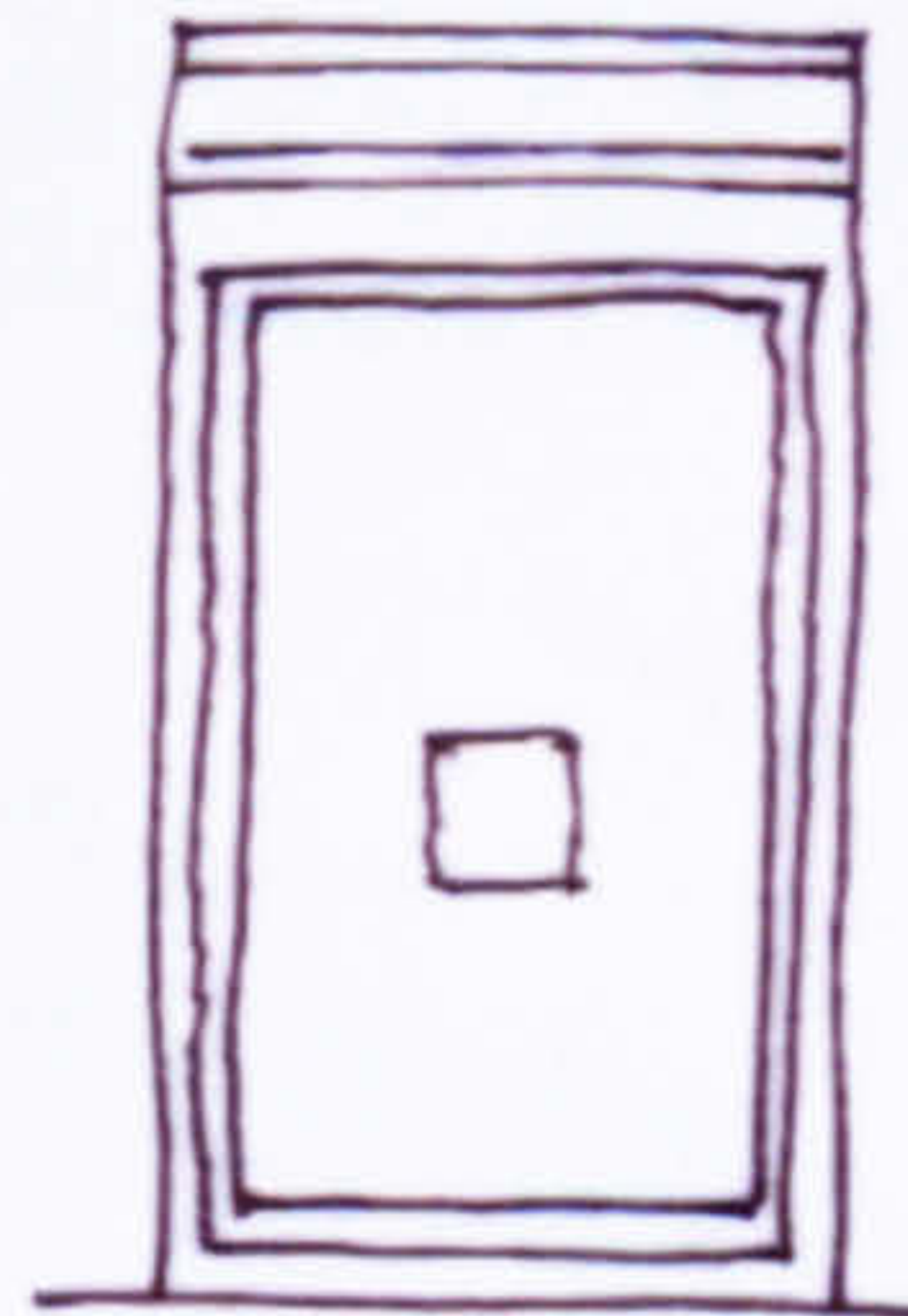
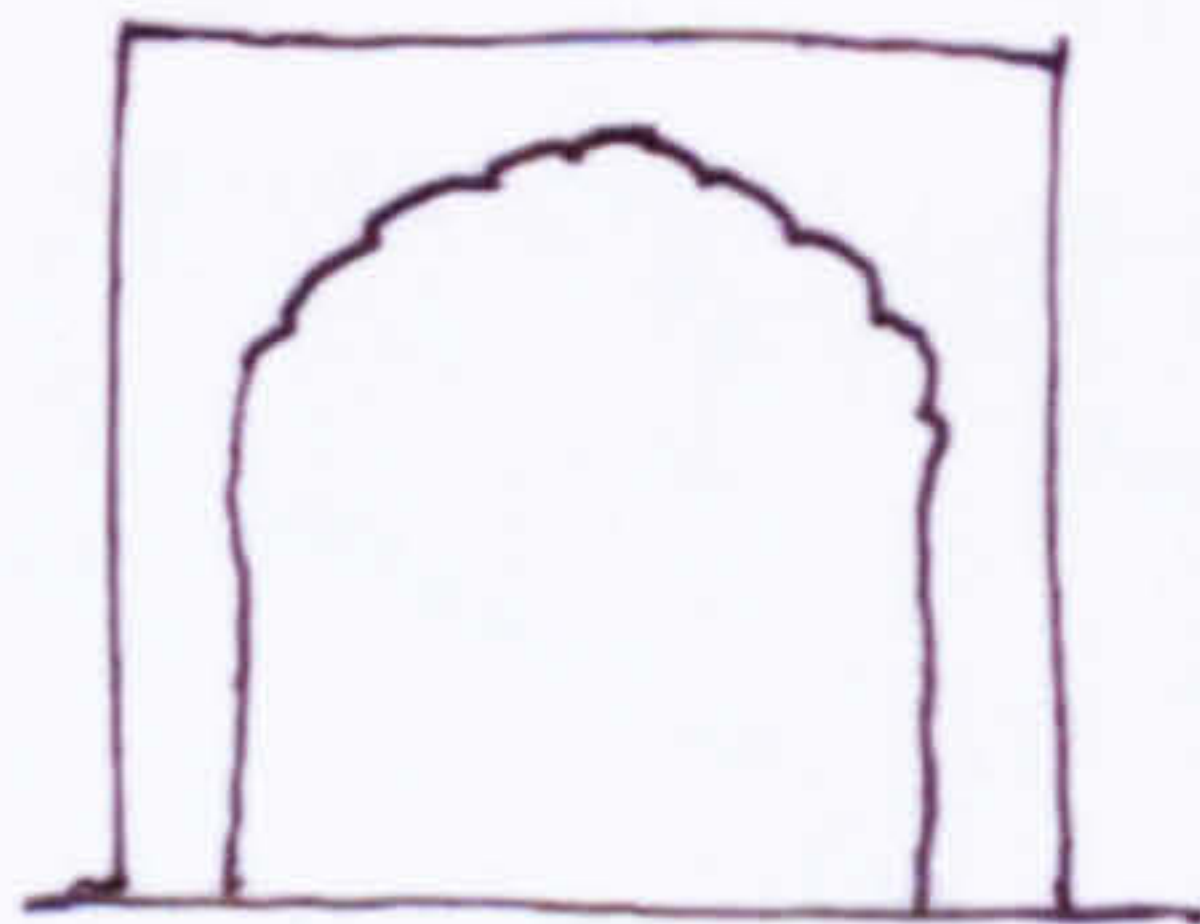
Aedicular juxtaposition, Purohit Haveli, Udaipur

**Figure 5.21 b - Aedicules - Mewar Region**

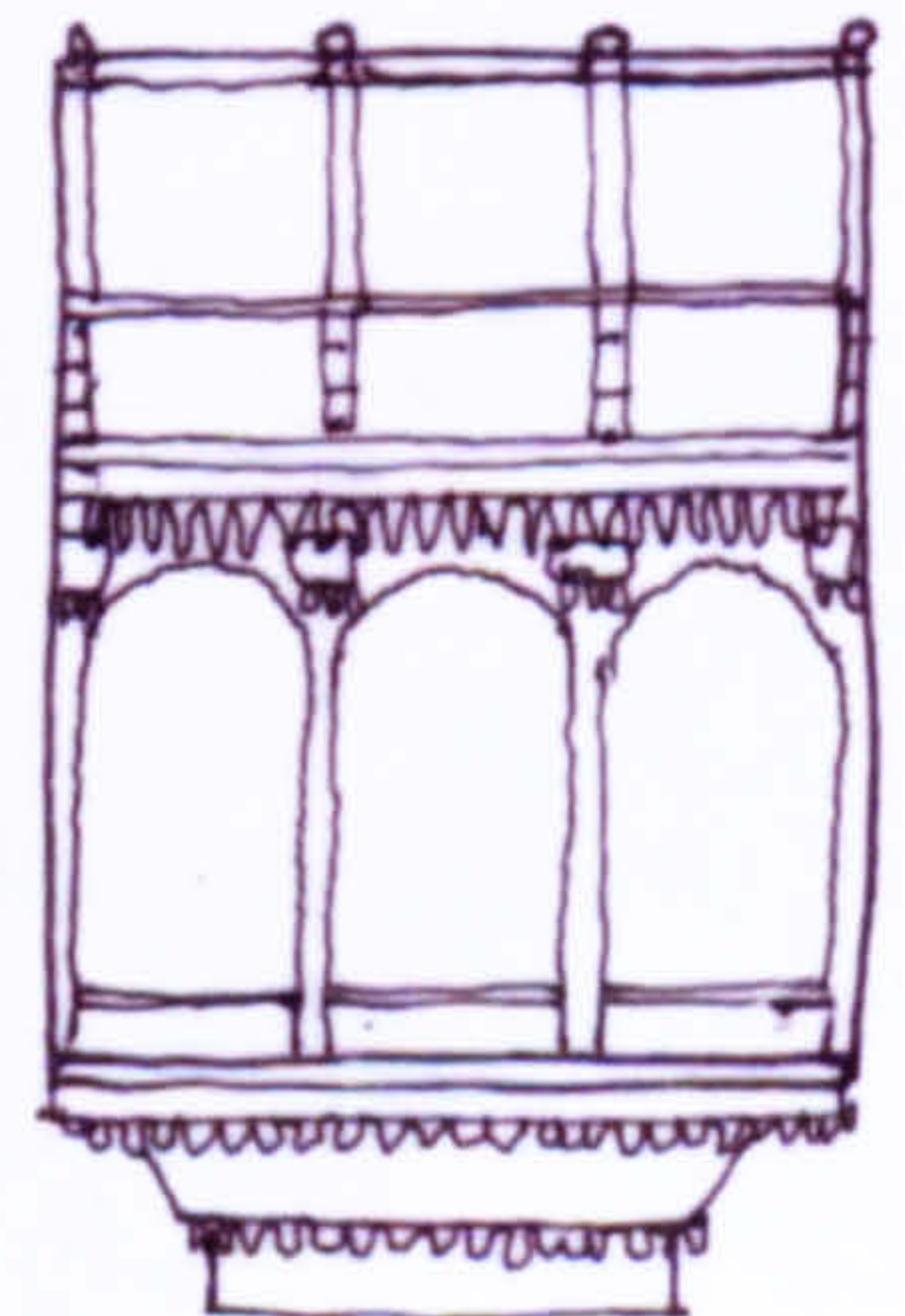
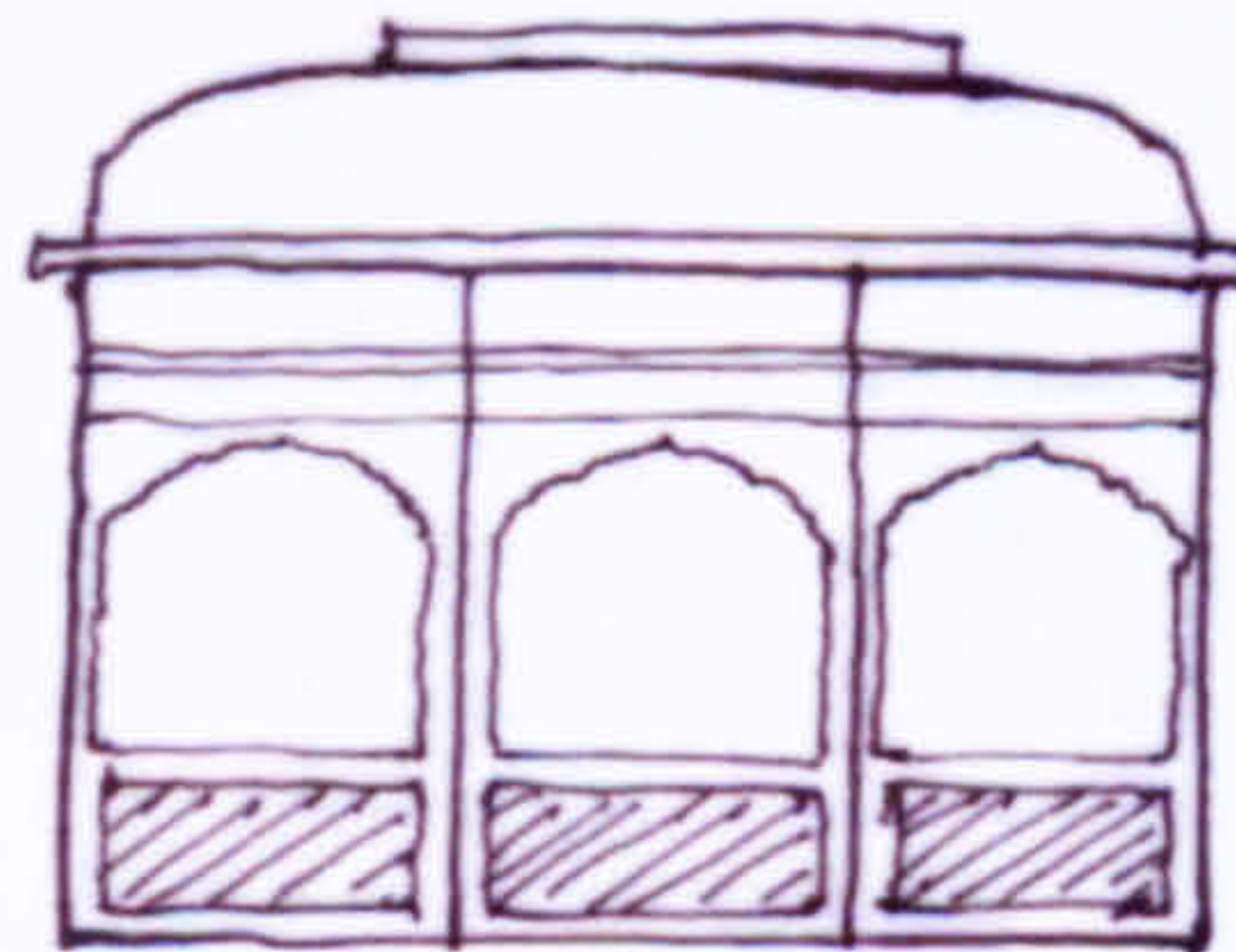
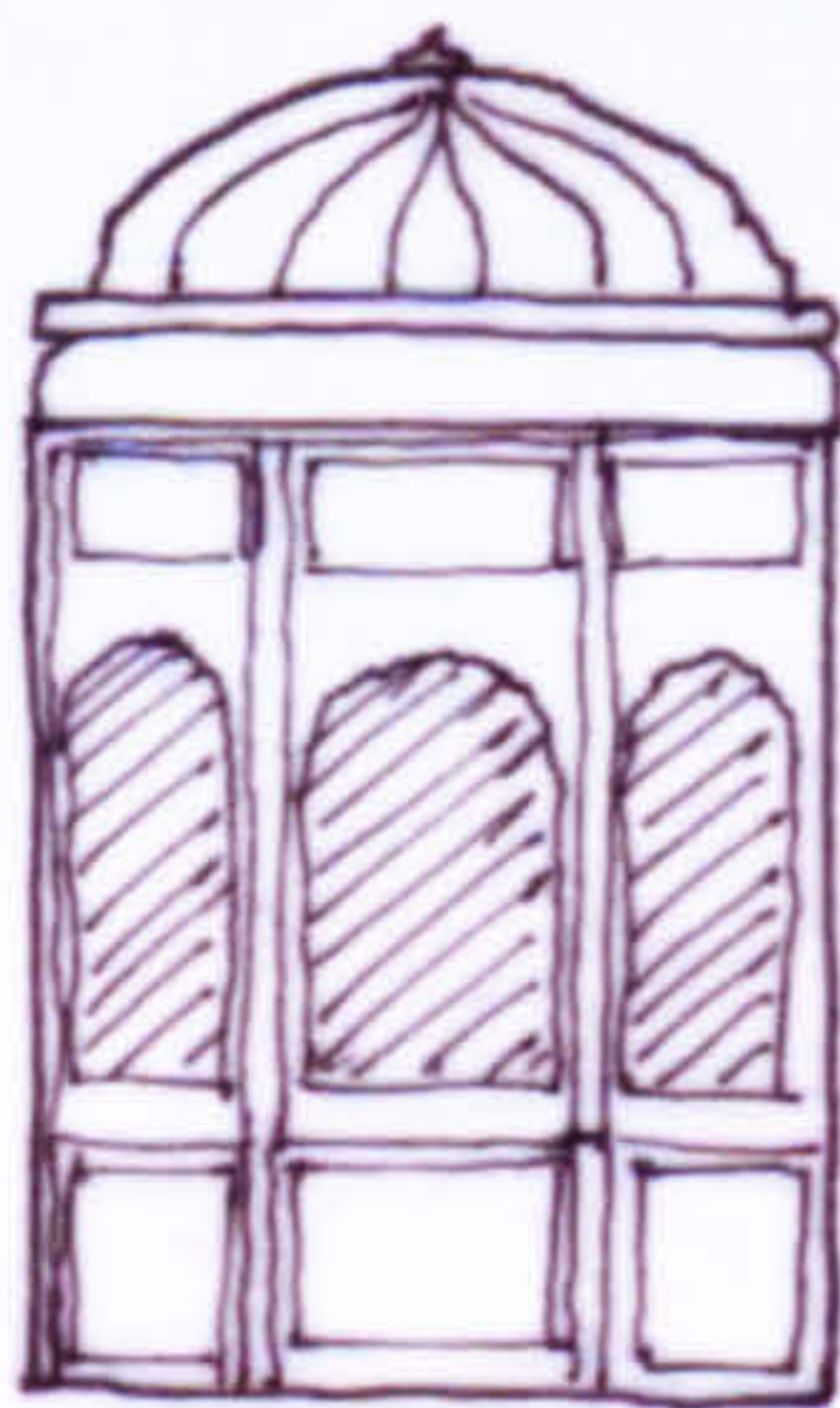




Entrance Aedicules



Simple (Single Frame) Aedicules



Composite (Multiple Frame) Aedicules

**Figure 5.21c - Aedicules - Mewar Region**





Mehta Haveli, Sawai Madhopur



Diwanon Ki Haveli, Alwar



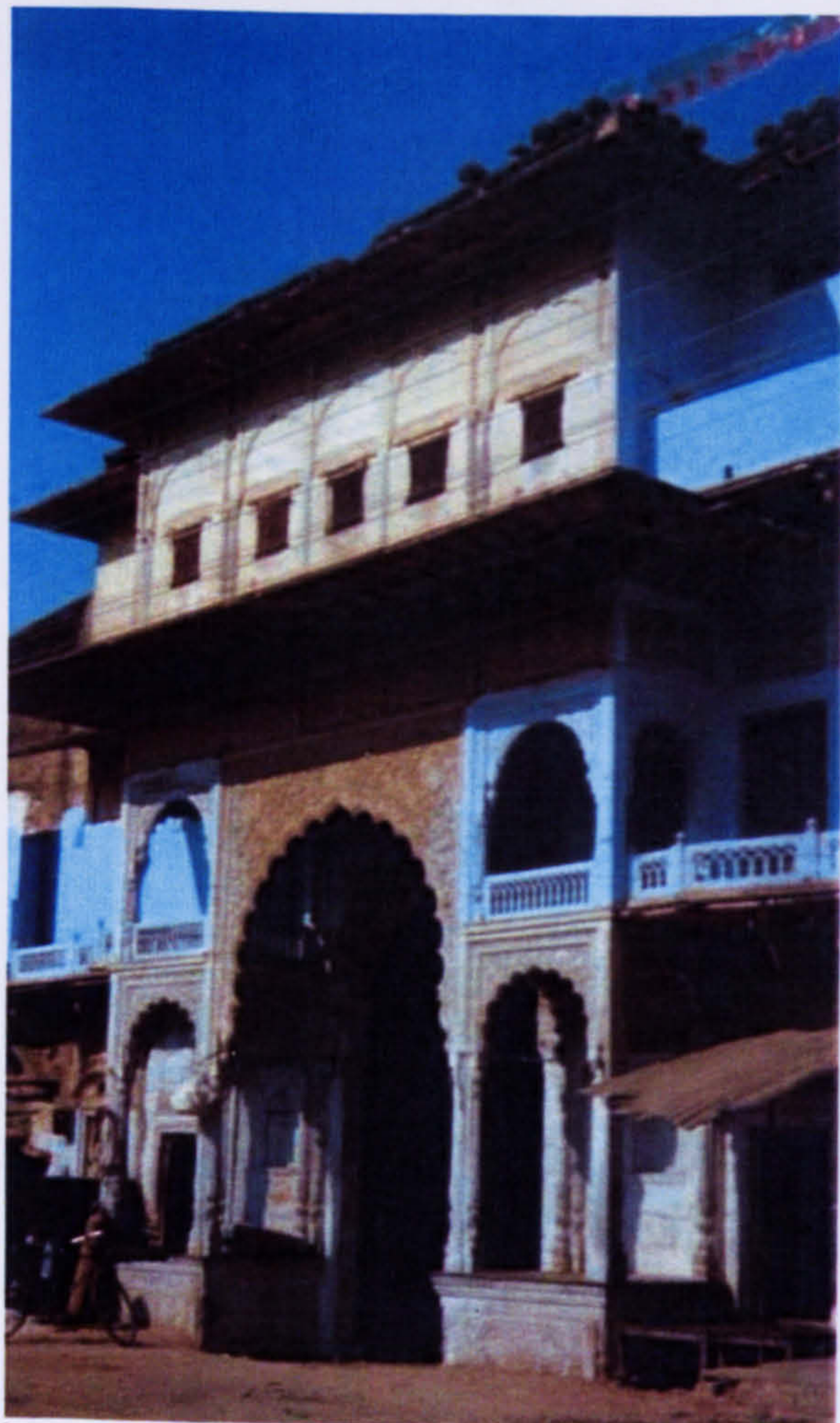
Agarwal Haveli, Tonk



Mehta Haveli, Sawai Madhopur

**Figure 5.22a - Facades - Mewat Brij Region**

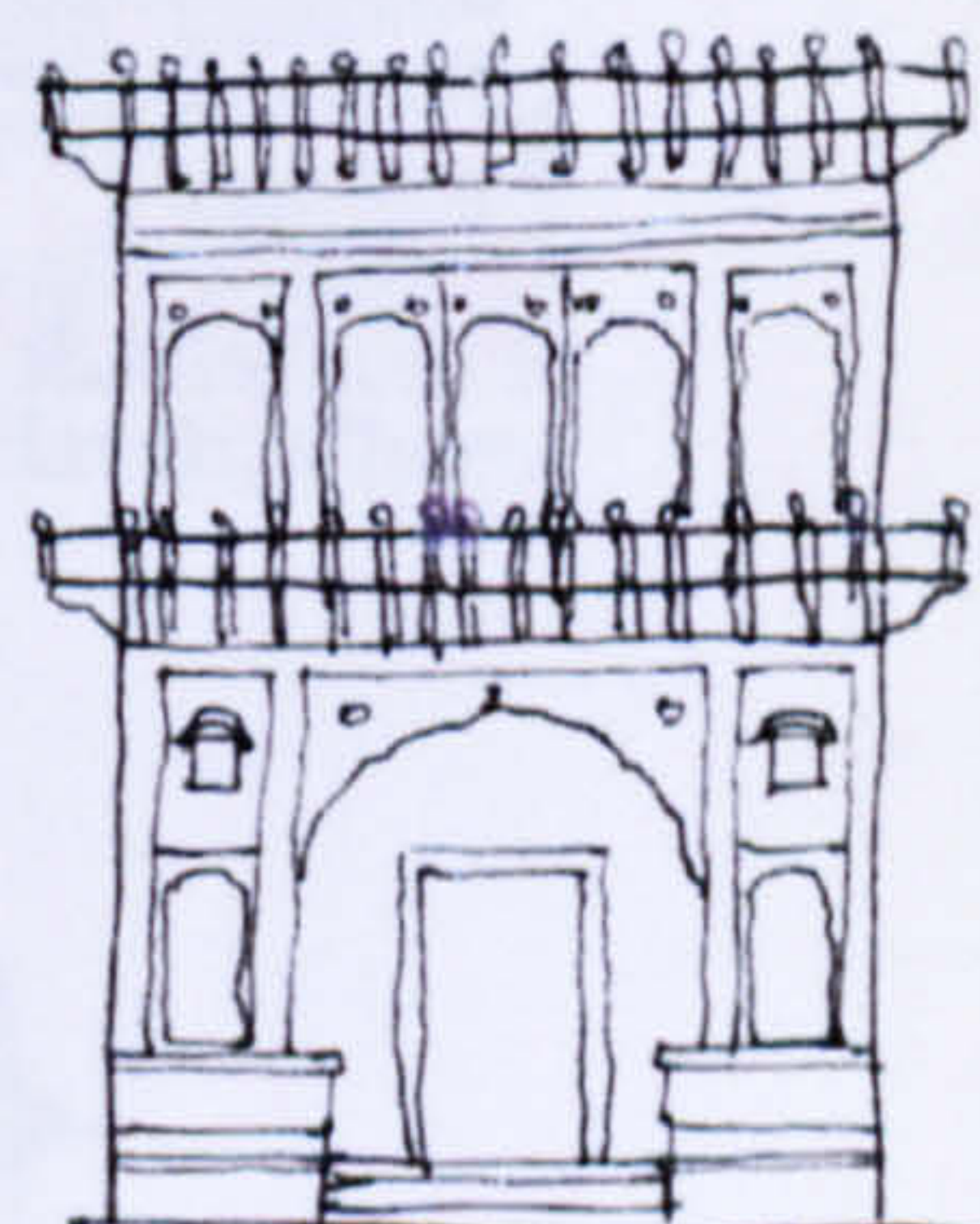
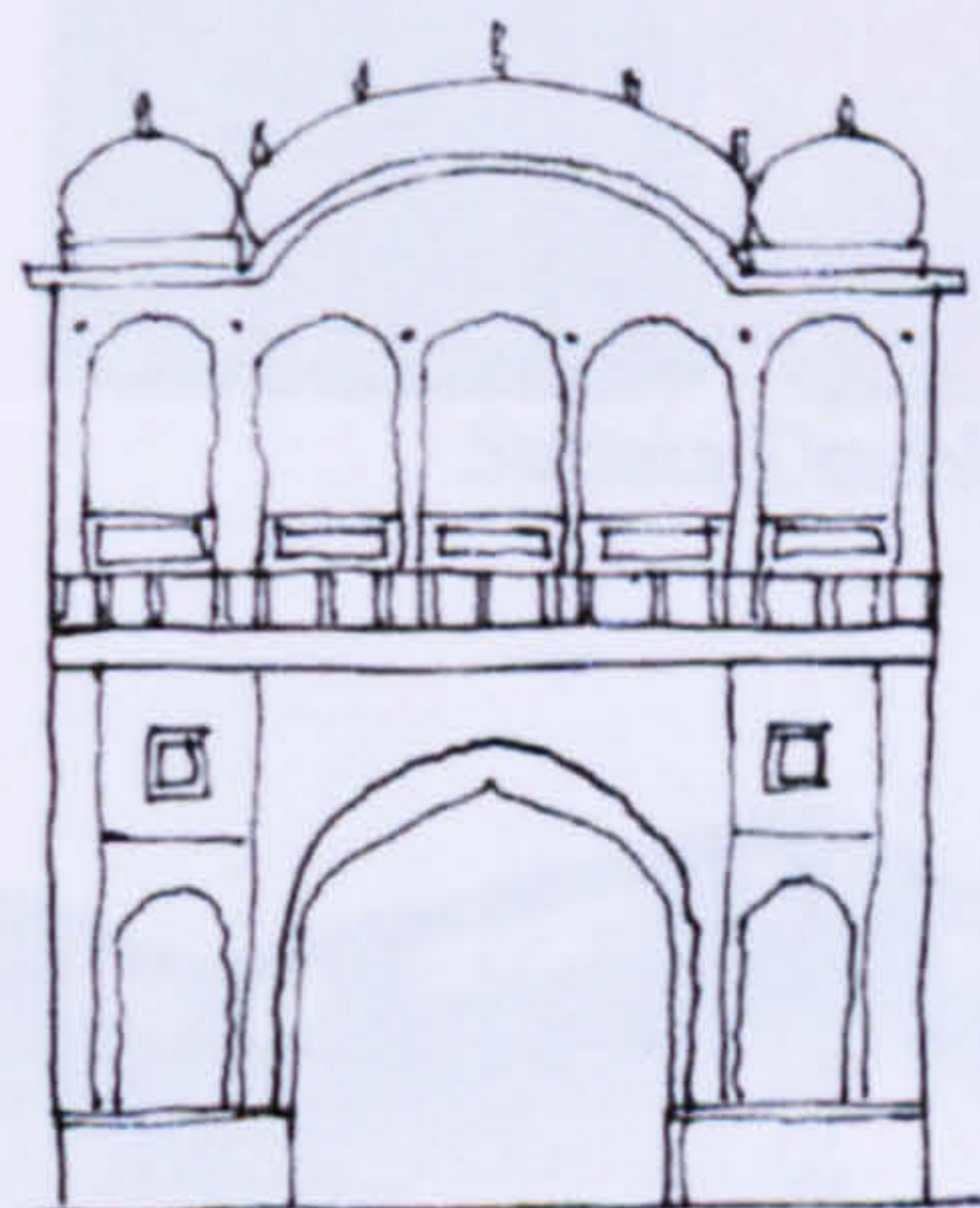
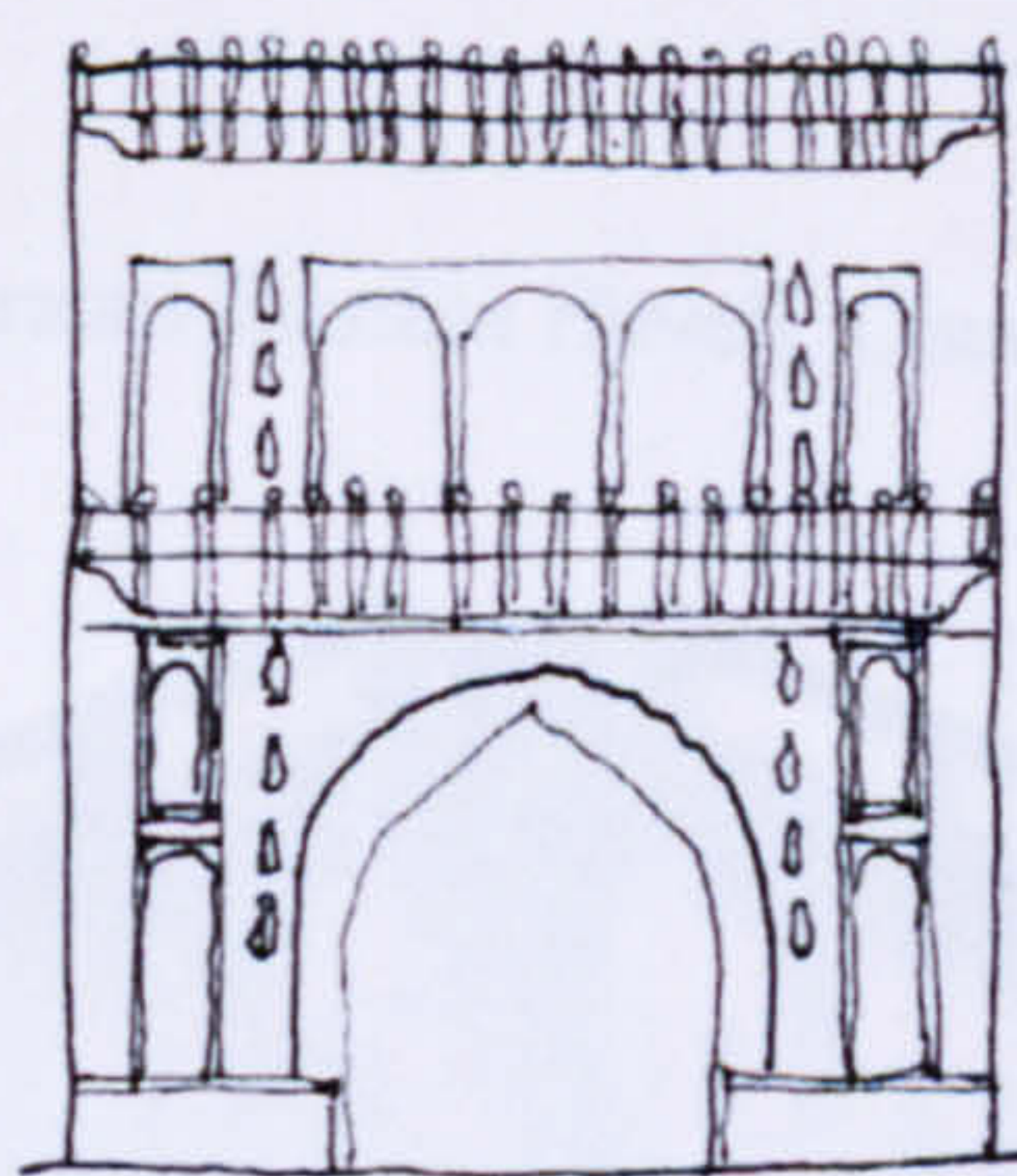
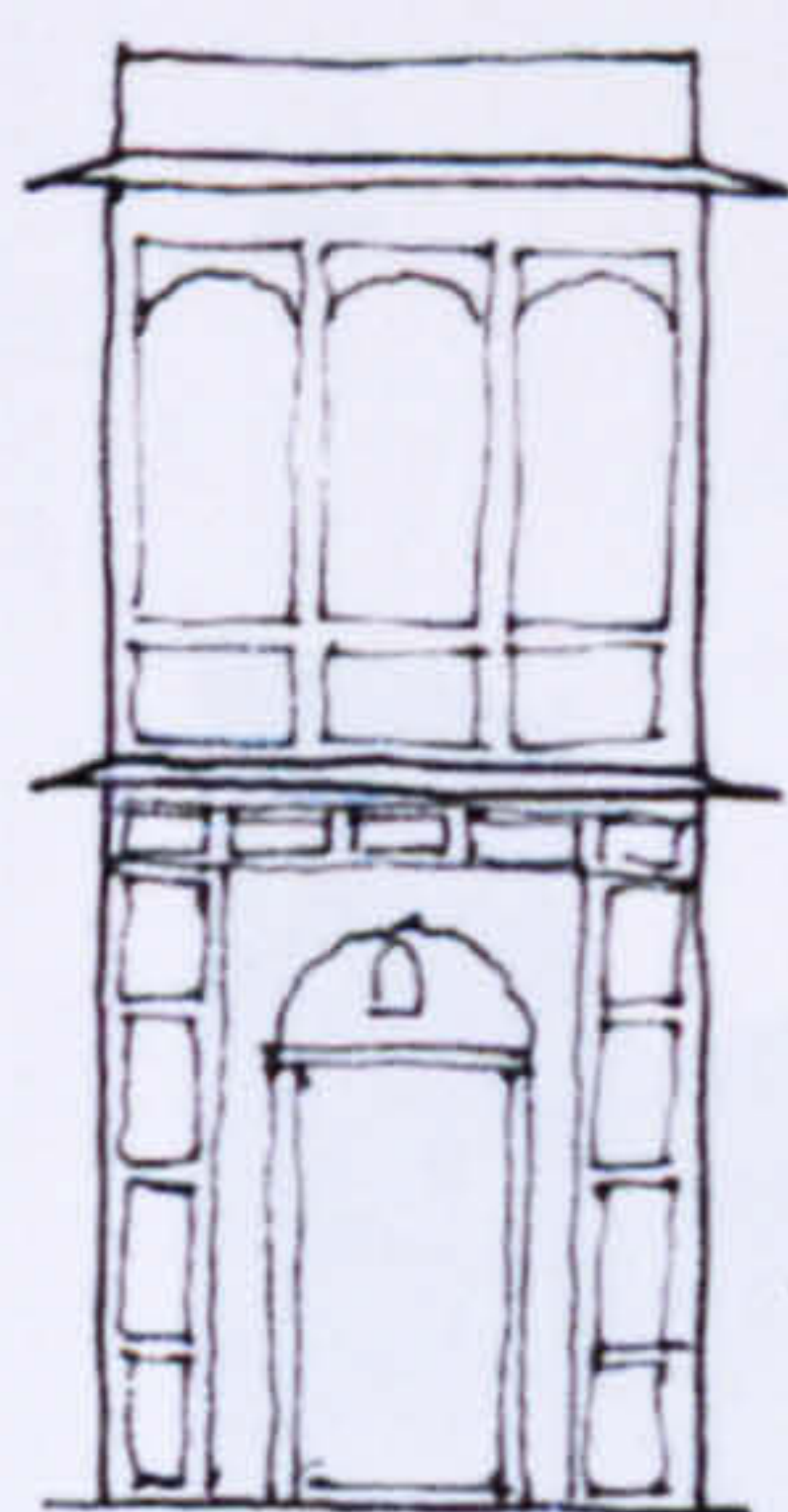




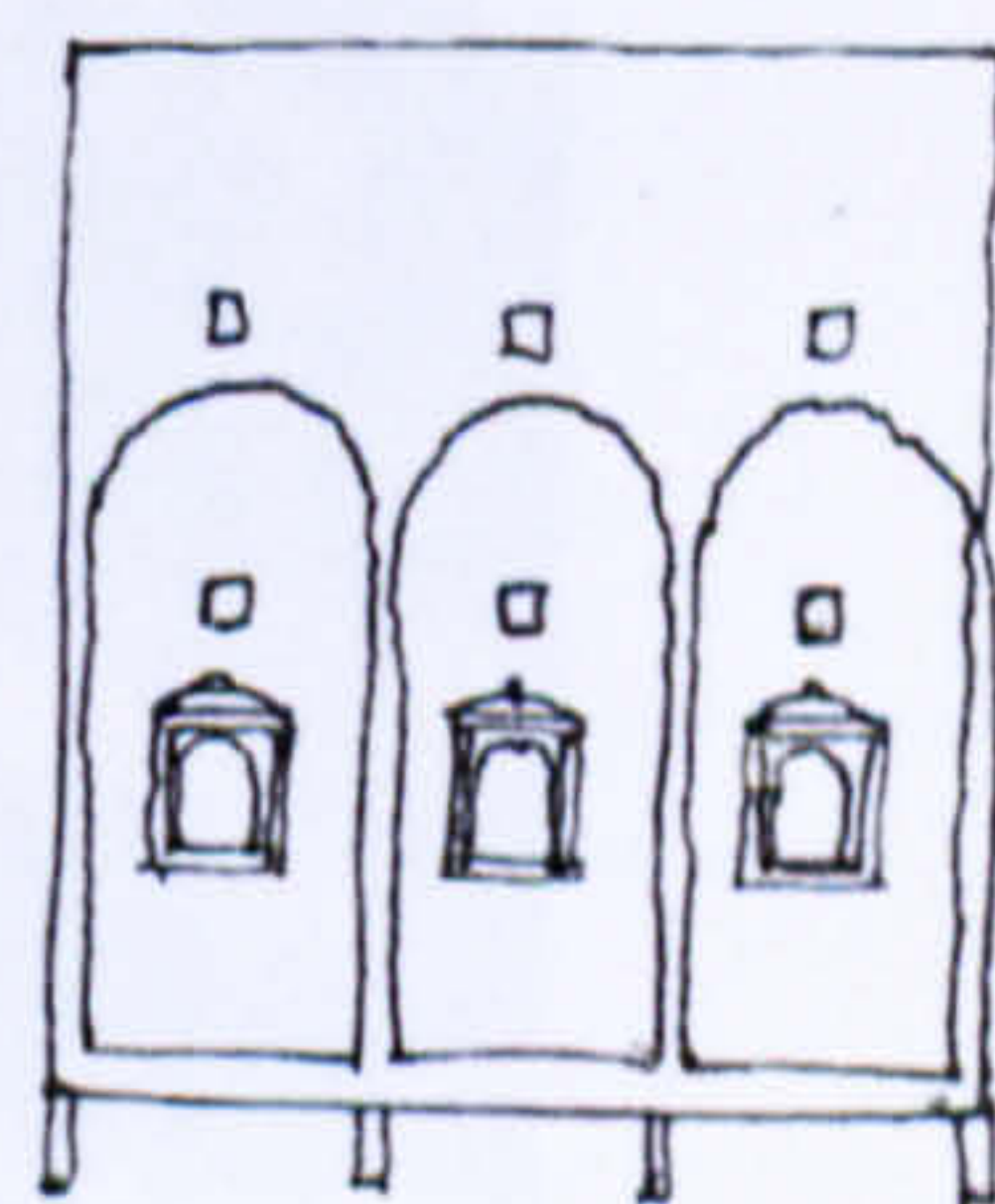
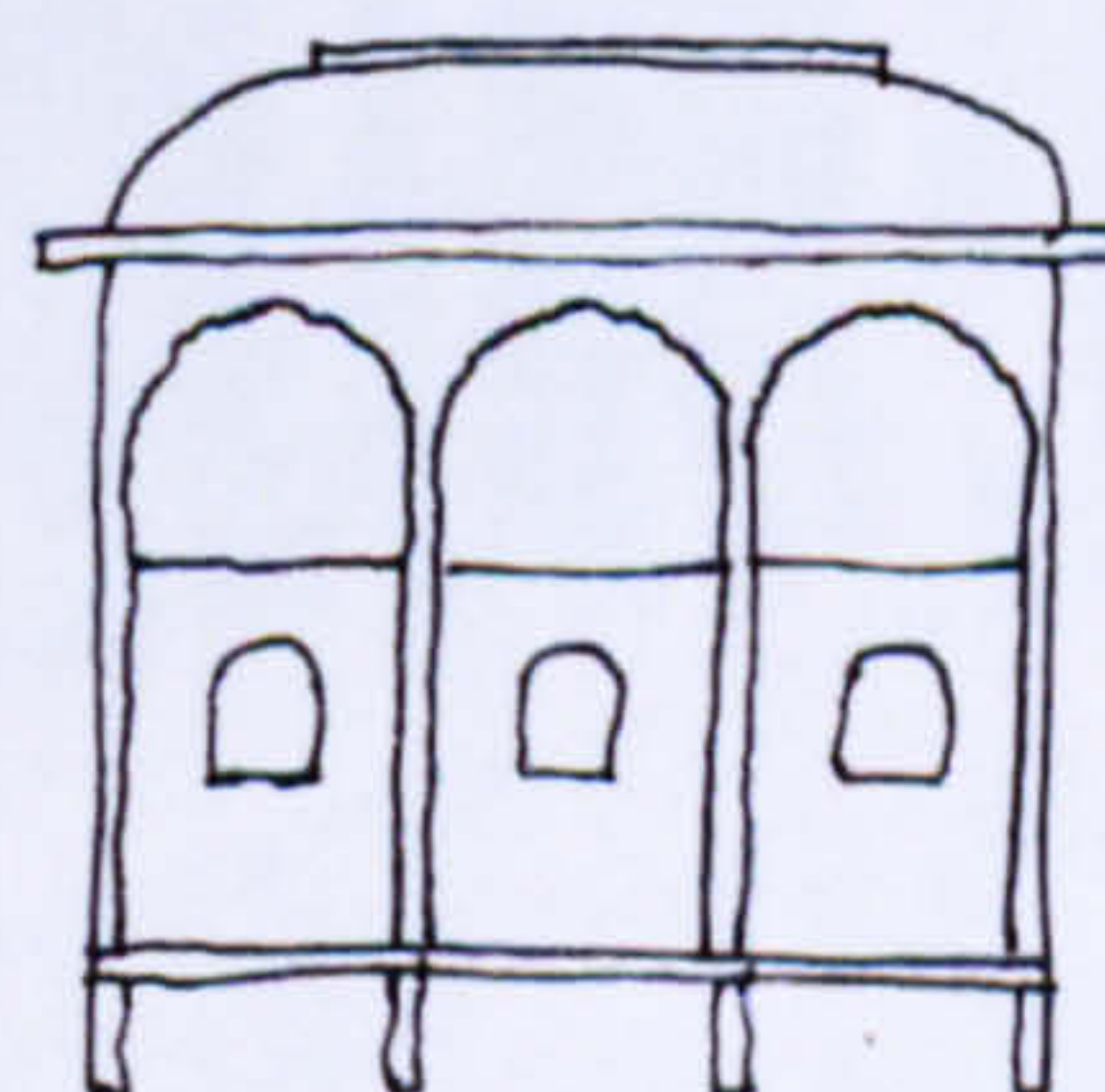
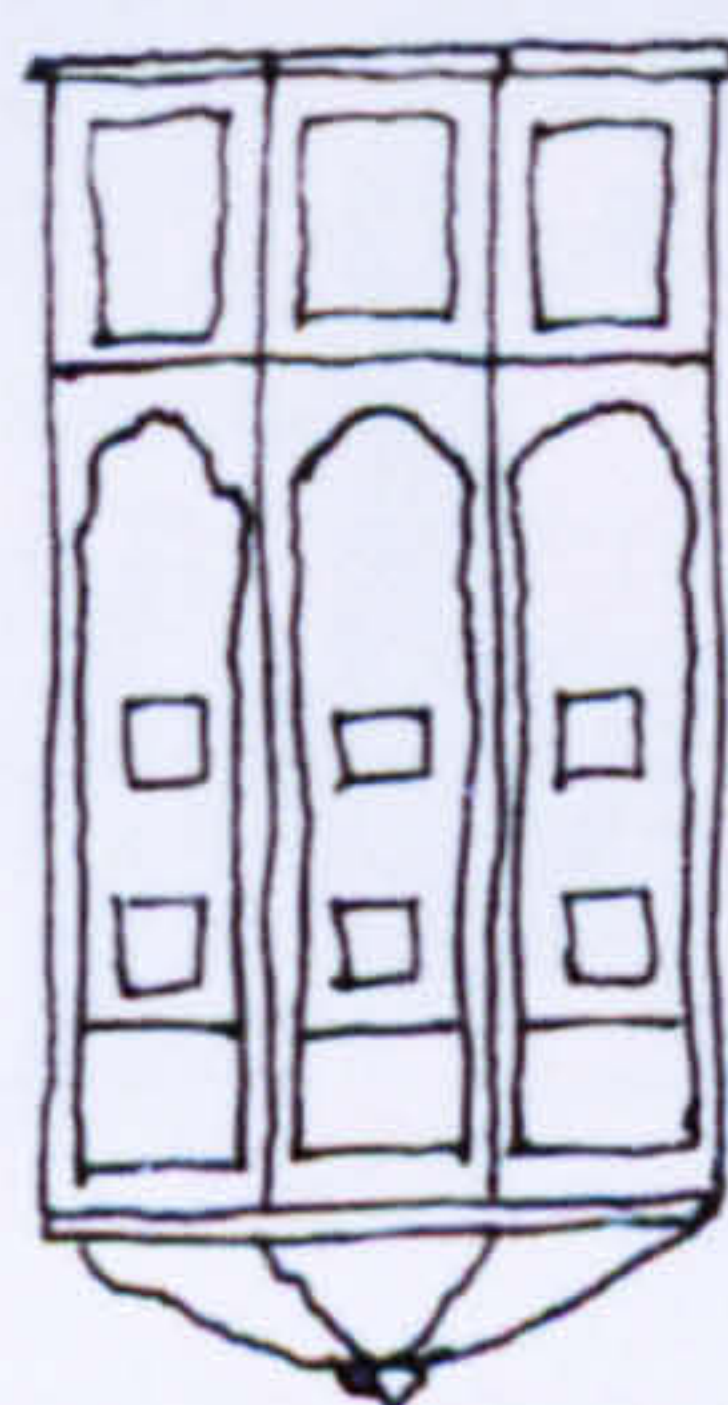
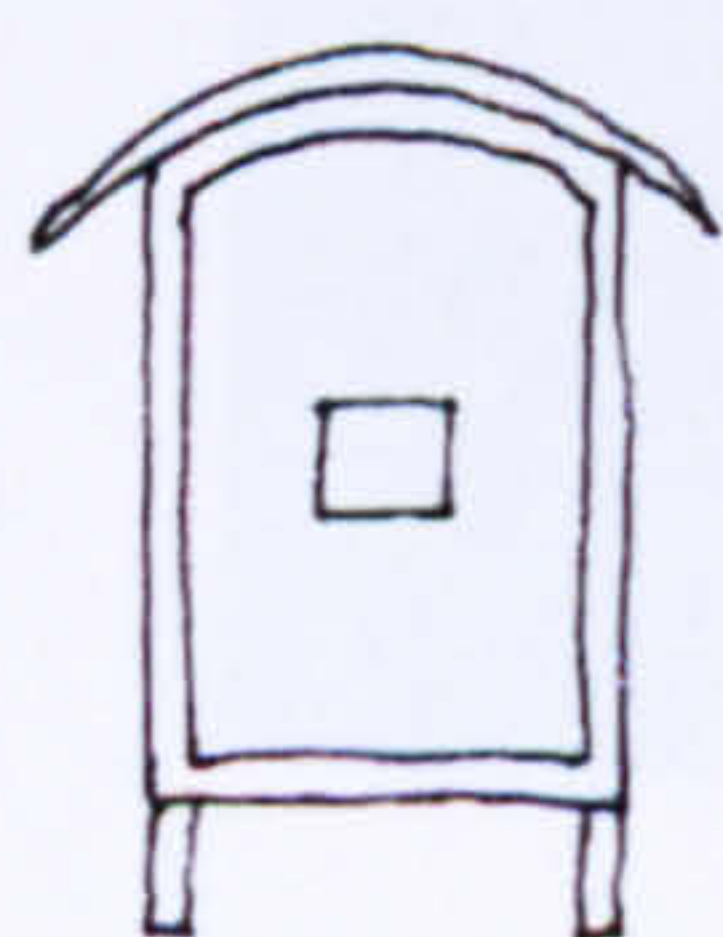
Ahmed Yaar Ki Haveli, Tonk



Mahmud Ki Haveli, Tonk



Entrance Aedicules



Opening Aedicules

Figure 5.22b - Aedicules - Mewat Brij Region





Gulab Rai Ladia Haveli, Mandawa



Navratan Banthia Haveli, Churu



Surana Double Haveli, Churu



Kulwal Haveli, Nawalgarh

**Figure 5.23a - Façades - Shekhawati Region**





Entrance aedicules with *gokha* as a triple arched canopy



Surface aedicules in a Haveli.



Entrance aedicule in a Marwari Haveli,



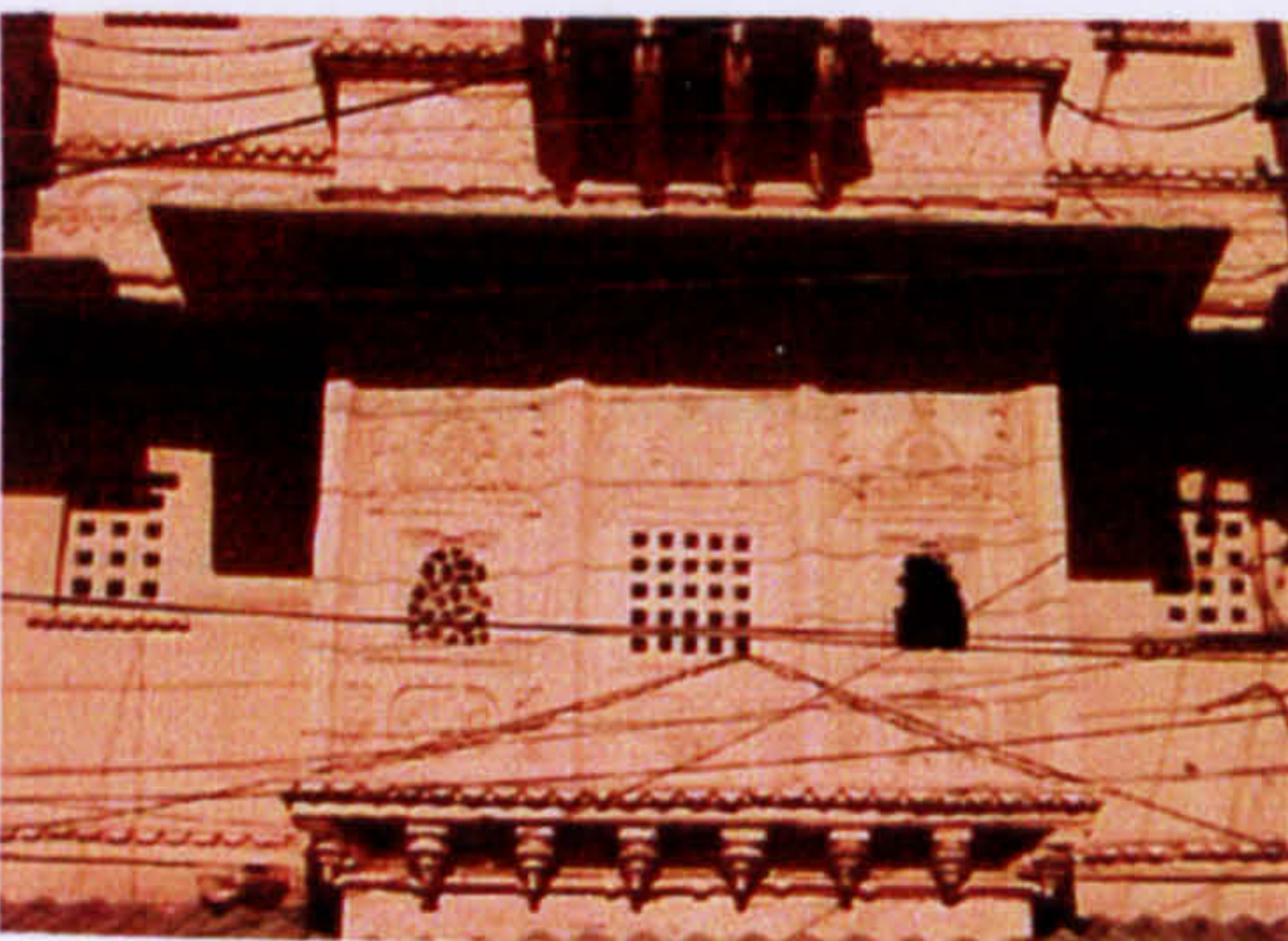
Entrance aedicule, Kulwal Haveli.

**Figure 5.23b - Façades and Aedicules - Shekhawati Region**

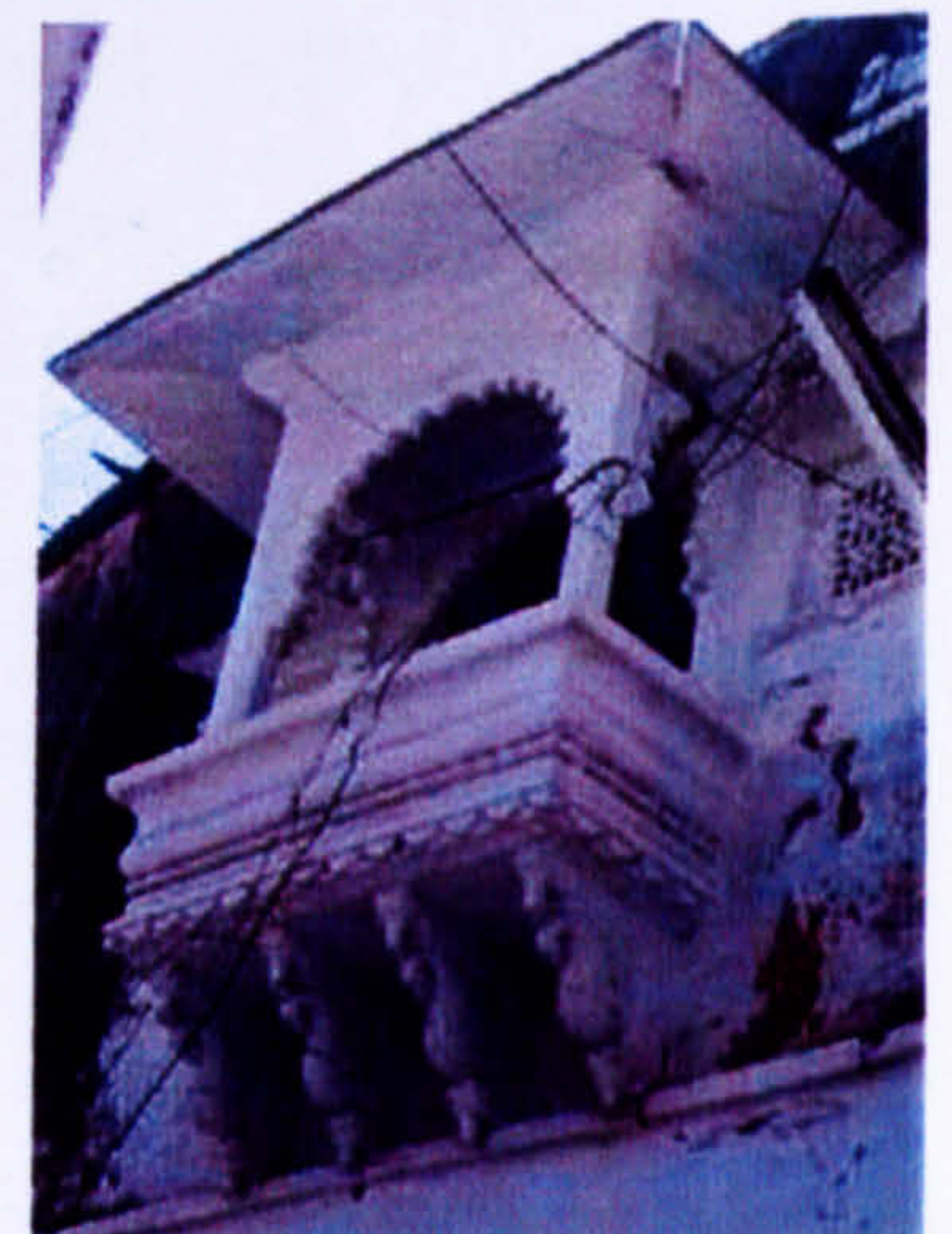




Rhythmic composition of simple and composite, projected and doubly projected aedicules in the Marwari pattern. Kothari Haveli, Banswara



Simple and composite, projected and doubly projected aedicules, Kothari Haveli, Banswara



Simple and composite projected aedicules, Ghughha Haveli, Dungarpur

**Figure 5.24 - Façades and Aedicules – Vagad Region**



**Shekhawati Region** (Figure 5.23a,b) follows the post Jaipur pattern with symmetric and formal façades. The façades show an increase in aedicularity with painted aedicules composed in a dense pattern. The façades are composed with a projected upper floor having a row of simple aedicules. The entrance aedicules shows more variation with the single arched *gokhas* of Jaipur *havelis* extending into a three-arched canopy. Although, these *havelis* were built at the same time and follow identical patterns yet a few variations in Shekhawati towns are listed by Ilay Cooper (1995).

The *haveli* façades in the towns of Banswara and Dungarpur in **Vagad Region** (Figure 5.24) show projected aedicules of both simple and composite kinds. Banswara *havelis* show the Marwari aedicular styles and Dungarpur *havelis* conform to the Rajput fortress style, an obvious influence from Mewar.

Further variations in the façades that result from difference in available construction materials are discussed in the next chapter on construction of *havelis*.



## 6 Building the *Haveli*

Fixity and persistence in plan, the sanction and legitimacy of precedent in the design, the formalization of techniques and process in construction, typify traditions in buildings, which operate as a coordinate system.<sup>1</sup>

Knowledge of traditional construction methods and principles can be gained in three ways. One way is the study of traditional building texts, but these offer only limited information about building construction in the form of obscure guidelines, which are at times difficult to apply on site. A second way is by tracing the construction methods through traditional craftsmen who are still available in the region. This is possible in Rajasthan as most of the traditional masons still follow the old principles: in fact the traditional methods are so deep rooted that the traditional construction vocabulary is still used in contemporary sites by the masons. And lastly the most authentic way is by observing the buildings themselves.

This research work uses the above three sources for information related to the construction of *havelis*. Specific chapters from the traditional fifteenth century text of *Rajvallabha* which discuss the construction of mansions of the courtiers (*havelis*) are studied. The traditional masons (*mistris*) from different areas of Rajasthan are interviewed to find about construction guidelines and rules of composition taught by their masters. The etymological roots of the traditional construction vocabulary are also traced. And finally, the existing *havelis* are studied and relevant observations made regarding construction details and materials used.

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<sup>1</sup> Oliver, Paul in *Dwellings, Settlements and Tradition*, 1989. p.56



The first section of this chapter describes the guidelines mentioned in *Rajvallabha* which might have influenced the construction of these *havelis*. This fifteenth century text was written by *sutradhar* Mandana who was working for Rana Kumbha in the Mewar region. In *Rajvallabha*, Mandana has also quoted a number of guidelines from the earlier Indian *vastu* texts such as *Brihatsamhita*, *Matsyapurana*, *Aparajitpricha*, *Samrangan sutradhar*, *Vastusakhya* and *Vishvakarma vastu shastra*. The first section compares these textual guidelines with field observations and examines the applicability of the textual prescriptions on site. Three chapters of *Rajvallabha* are interpreted for information related to construction of *havelis*. Chapter five of this text describes the palaces and mansions of the courtiers. Chapter nine describes the architectural features for homes of officials and courtiers and Chapter ten discusses the units of measurements. Besides the textual interpretation, this section also describes the rituals while constructing a house in Northern India, a few of which are observed till today.

The second section describes the traditional builders and the construction vocabulary used by them and discusses the actual methods of construction as well as the dimensional norms linked with the plan and façade form of the *havelis*.

Generic principles for the construction of *havelis* are established by comparing the textual prescriptions with the masons' interviews. The last section describes the sub regional variations due to the available construction materials in different parts of Rajasthan and their impact on the *haveli* form.



## 6.1 Rules and Rituals – From the Texts and in Practice

### Land for building *havelis*:

Chapter five of *Rajvallabha* begins with the description of the ideal plot size for the dwellings of rulers in *hasta*<sup>2</sup>: such as land of 108 *hasta* for the king, 78 *hasta* for owner of 100,000-200,000 villages, 68 *hasta* for owner of 50000 villages, 58 *hasta* for owner of 20,000 villages, 48 *hasta* for owner of 10,000 villages, 38 *hasta* for owner of 5000 villages, 28 *hasta* for owner of 1000 villages and 18 *hasta* for the owner of 100 villages. It also mentions that a minister's house should be half of the king's abode. Some specifics about the size of dwellings that are comparable to a king's abode are also mentioned in chapter nine. Any son of the king should have a dwelling size of 80 *hasta* (or decrease by 6 *hasta*), army commander's dwelling should be 64 *hasta* (or decrease by 6 *hasta*), A ministers' dwelling should be of 60 *hasta* (or decrease by 4 *hasta*), a *rajpurohit*'s dwelling should be of 28 *hasta* (or decrease by 2 *hasta*). The length of a *purohit*'s house should be twice the width. A Vaishya's dwelling should be 24 *hasta* (or decrease by 4 *hasta*). Besides these, dwelling sizes for common man are described in four caste categories, Brahmin, Kshatriya, Vaishya and Shudra.

A direct application of these dimensions is clearly ruled out as the land for *havelis* in different cities of Rajasthan is worked out in consideration to the site specifics. Besides, most of the measurements found in the maps of medieval times are in the Mughal units of measurement i.e. *gaz* and evidently the plots

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<sup>2</sup> The units of measurements and their equivalents in feet/ inches are explained in Table 6.1. For further details on traditional units such as '*hasta*' and '*angula*': refer Vibhuti Chakrabarti (1998)



were marked using this unit. It is more feasible to comment that the size of land available for building *havelis* was proportional to the social and political hierarchy of the courtier as suggested by the texts too.

### **Rules for Proportions of a dwelling and orientation of spaces**

Chapter nine of *Rajvallabha* describes the rules and proportions in a courtier's dwelling. The width of the plot is used to derive at all subsequent dimensions (also mentioned in the interviews with the traditional masons). Width is considered as the dimension of the plot that faces the road and marks the entrance. The rules on the proportions of a dwelling mention that the length of the dwelling should be  $1/5^{\text{th}}$  or  $1/10^{\text{th}}$  parts more of the width ( $W + W/5$  or  $W + W/10$ ). An eight *hasta* house should have one floor and an additional floor should be added with an increase in size by 10 *hasta*. This indicates that the heights of the dwellings should be proportional to the land available.

But the observations in fieldwork show some contradictions to these rules for example in the city of Jaisalmer, Nachna *haveli* is built on a large plot with just 2 floors and a basement whereas the Patwa *haveli* is built in a smaller plot with 4 floors and a basement.

Chapter nine also has rules for walls and foundations in a smaller unit *angula*. The wall thickness relates to the width of the house and the size of foundation is derived from the wall thickness and height. According to the text, one should construct a plinth between one *hasta* and three *hasta* with an increase of 6 *angula*. The plinth mouldings and decorations should be according to the caste i.e. 6 *hasta* for Brahmins, five *hastas* for Kshatriyas, four *hasta* for Vaishya and



three *hasta* for Shudra. In contradiction to this rule, a regional variation is observed in plinth proportions irrespective of the caste such as higher plinths in all *havelis* of Jaisalmer and very low plinth in the dwellings of Sirohi town.

Chapter five also describes the sizes of *shala* (wing of house with rooms) and *alind* (semi covered verandah). These correspond to the *sal* and *tibari* spaces in the *havelis*. According to these rules – if a house is divided into five parts, *alind* should form two parts, in case of seven parts, *alind* should form three parts and in case of nine parts, *alind* should form four parts. House should have adequate sunlight and wind circulation and should not cast shadow on a well. If the dwelling is divided into 24 parts, the centre or court should be 14 parts. Chapter nine mentions that these dwellings should have double *alind* on three sides with a passage in front or triple *alind* on four sides and an entrance with *gokhas*. Columns in the verandahs should be of the same size. Height of each floor should be slightly less than the lower one. Size for *shala* and *alind* are given as follows:

$$\text{If } x = \frac{\text{width of house (W)} + 70}{2}$$

Then size of *shala* should be  $x/14$  and size of *alind* should be  $1/35^{\text{th}}$  of size of *shala*. But the mason's interviews explained in the next section reveal that the sizes of these spaces were a resultant of the stone span available in the area.

According to *Rajvallabha*, the height and width of entrance door is also proportionate to the width of the house. Rules regarding door proportions state that the door heights should decrease in hierarchical order i.e. each inside door should be slightly less in height and width than the outer one. Also the doors on upper floors should be slightly lesser in height than the corresponding ones on



the lower floors and the centre of doors on all floors should be aligned. If the height of a floor is divided into nine parts, the column should form six parts. The head of the column that has *kumbhi* and *patta* (lintel) should be half of the column height. The door should always be on the right side and the door lock on the left wing of the door. Even the size of the small opening (*khatki*) in the main entrance door is specified as slightly more  $1/16^{\text{th}}$  of the entrance door. It should be located below the centre of the main door. This chapter also mentions the types of timber to be used in dwellings. The two wings in double doors should be of the same timber and should be equal in all respects. The doors should not open or close on their own. Some of these rules such as the hierarchical decrease in the height of the doors and the rule for alignment is observed in most *havelis*.

According to *Rajvallabha* only square columns should be used in dwellings and circular, octagonal and decorative columns should only be used in temples. But the *havelis* of Rajasthan have circular and octagonal columns too. The rules also mention that the *patshala* should have 2 or 4 columns in the centre. Projections of balconies are related to the height of the dwelling ( $h$ ) and prescribed as  $h/2$ ,  $h/4$  or  $h/5$  from the external wall. Six types of brackets are described as bird form, flower form, snake form, peacock form and timber petal wings (*kaasthfalak*). Some of these were also observed in the fieldwork. Stone stairs are recommended for temples and timber ones for dwellings but all *havelis* in Rajasthan have stone stairs. According to the texts, expansion or extension of the dwelling should be on all four sides. This rule indicates a centrifugal expansion but in practicality the application was not possible. In most circumstances, the land available for expansion was on one side of the dwelling;



hence a complete court with wings was constructed on that side as observed in Bade Devta *Haveli*, Kota.

Besides these rules, chapter five also mentions orientation of particular rooms. With spaces like treasury, clothes, temple, money, stables, female section, kitchen and garden in the North direction and cows, water, weapons and elephants in the South direction. In the fieldwork it was observed that some rules of orientation were followed in relation to East or the direction of the rising sun, but specific applications from the texts were not evident.

### Units of Measurements

Chapter ten describes the units of measurements as *hasta* and *angula*. It also explains area calculations for square, octagon, circle and other shapes. According to *Rajvallabha*, the measurement system was based on proportions of human body – *angula* (width of the middle phalange of the middle finger), *hasta* (length of arm), first foot and step. It is interesting to note that the smallest unit of measurement i.e. an *angula* is located as the central division of an open palm (indicating the significance of centre in the Indian context). Miki Desai also interprets that the application of these units in terms of simple geometry, modules and proportions responded to the located centre of construction, always in response to the cardinal direction.<sup>3</sup>

According to the 15<sup>th</sup> century inscription on Victory tower at Chittor in the Mewar region<sup>4</sup>: the basic unit of measurement i.e. a *gaz* was equivalent to 22 ½

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<sup>3</sup> Desai, Miki. 1989

<sup>4</sup> Agarwala, R.C., 1957



inches and divided into eight parts. This was used in construction by the *sutradhars* of Mewar in the 15<sup>th</sup> century. But during the reign of the pre Mughal ruler Sikander Lodi (early 16<sup>th</sup> century), the *imarati gaz* equivalent to 33” was introduced. The traditional masons also talked about using *imarati gaz*.

### **Rituals followed in Construction work**

Most of the religious ceremonies mentioned in the texts such as ‘*Vastu-pujan*’ and ‘*Griha pravesha*’ are still observed in contemporary house construction, which indicates that they were definitely observed in the medieval times, possibly with more pomp and show. Evidence of some of these ceremonies was found in the *havelis* with the installation of the temple shrine as in case of Suraj *haveli* in Jaisalmer. The *Vastu-pujan* ceremony is performed on an auspicious day for beginning construction work. This is associated with the symbolic act of converting the ground into the extent of manifested universe. In the earlier times, the *havan vedi* was made in the centre of the proposed courtyard of the *haveli* or in other words, the *havan vedi* demarcates the centre for the ritual, *zenana* court as explained in chapter four of this research.

Auspicious days were also selected for different stages of construction such as the laying of entrance stone and laying of the door lintel. Some of these practices are still followed in contemporary construction in India such as distributing sweets (*ladoos*) on laying of R.C.C. roof, or not casting the roof on a Saturday. The masons still observe prayers and do not work on the Vishvakarma day, which falls twice a year. Some of these religious beliefs became evident during fieldwork by talking to the residents. The story linked to *Mahturawalon ki Haveli*, Tonk is that the foundation stone of 52 *havelis* was laid by the on the



same day in different cities and this was one of them. Pushya Nakshatra *Haveli* in Jodhpur (1890) was only constructed on these specific days of 'Pushya Nakshatra' during the year. It took 21 years for completion in which construction took place for a total of 273 days. Clearly, the local pundits influenced the timing of construction activities. This was related to astrological calculations related to the birth of the owner and the ruling planets.

The impact of astrology on construction in the Indian context can be studied in further detail. But it did not have any direct influence on the architectural form, which was always controlled by the architect or *sutradhar*. Most of the above customs are mentioned in the texts, but the practice must have been precedent to the texts. And the application of these textual principles cannot account for specific site situations and construction solutions. These can only be studied in the actual form. Texts were used more as design systems rather than rigid rules. They should be interpreted as changing norms as opposed to absolute guidelines since new paradigms developed with each social change and local features often took precedence over textual prescriptions.

## 6.2 The Traditional Builders and their Vocabulary

### The Builders and their way of working

*Rajvallbha* is an example of the wealth of knowledge acquired by Mandana who was a *sutradhar* responsible for supervising construction work on site. It is also evident that these *sutradhars* enjoyed royal patronage and were often awarded a silver or gold yardstick for excellence in their work. The article on the genealogy of Mewari *sutradhars* in *Indian Historical Quarterly* (1957) traces



Mandana's descendents practicing in Mewar and Dungarpur areas till the 17<sup>th</sup> century. Appointments of state architects is recorded in history with examples of Mana and Phana working under Rana Mokala of Mewar and Vidyadhar working for Jai Singh in the construction of Jaipur in the eighteenth century.

The masons followed their own architectural language and rules of grammar learnt orally from a *guru* and developed them with time and practice. 'A gulf separated this abstruse Sanskrit literature from illiterate builders on site. A *sutradhar* (man with the measuring thread) still directs a team of *mistris* (masons) and laborers.'<sup>5</sup> The emphasis on oral learning as opposed to a textual one is evident in the Indian context.

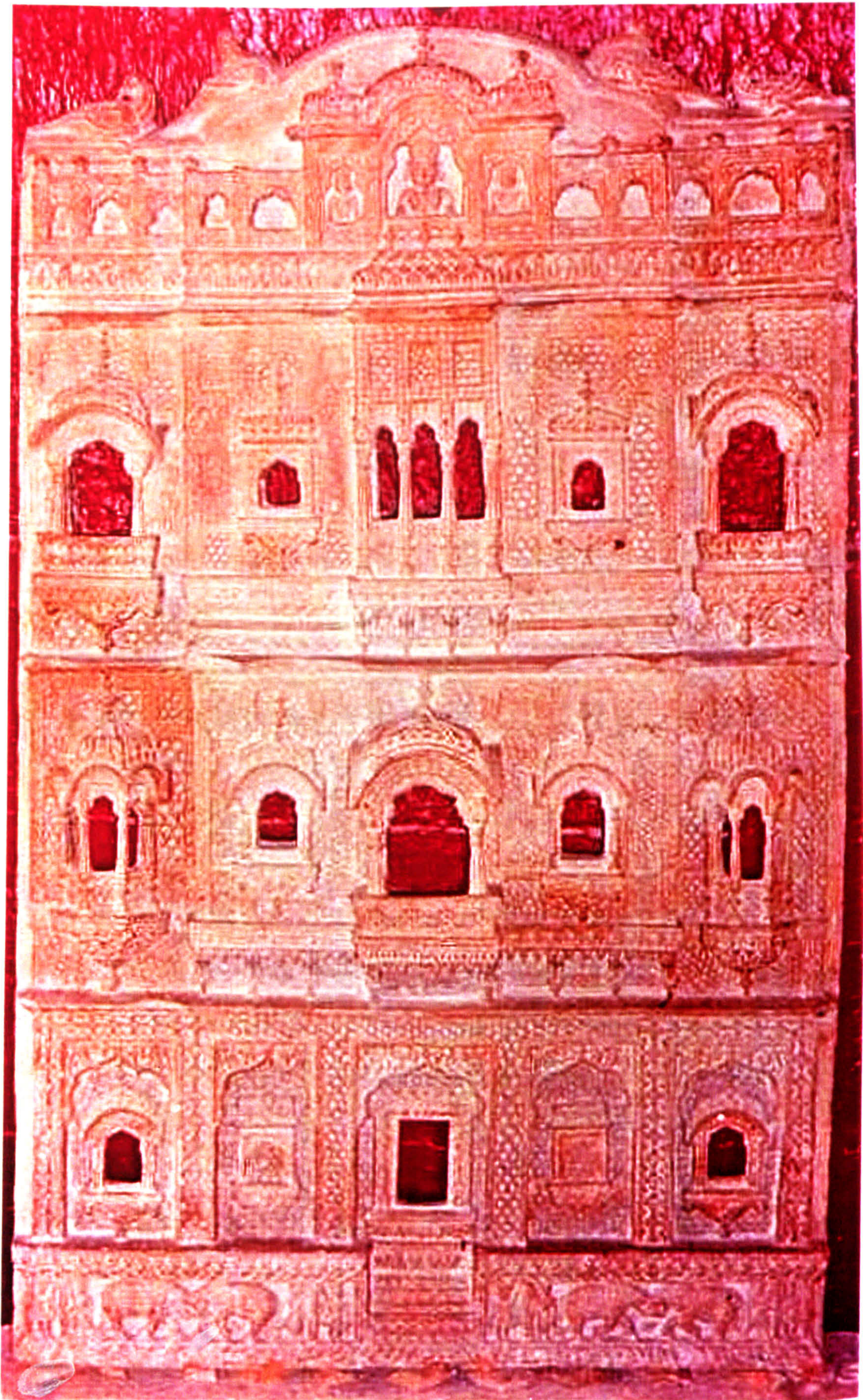
Initially there was no practice of making plans on paper. Although some evidence of making *haveli* plans is found later in the Mughal period. Ahsan Qaisar (1988) mentions the term *tarah* used for plans. Another term *naqsha* was also common and is still used for building plans in India. The Mughal term *naqsha-naveez* was used for a draftsman. A document refers to one Jawaharmal, a *mimar* who prepared the *tarah* of the house (*haveli*) of a dead noble on Aurangzeb's order.<sup>6</sup> In case of Rajasthan, a few schematic *haveli* plans are present in the maps of medieval times at the library at city palace, Jaipur. These plans are conceptual without any dimensions. The practice of making construction drawings was definitely not followed. It is likely that the *sutradhar* made an actual layout on the site before proceeding with the construction. This is still practiced in India: lime or a course of brick is used to mark the plan on site and to show the layout to the house owner.

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<sup>5</sup> Cooper, Ilay and Barry Dawson, 1998 p.14

<sup>6</sup> Qaisar, Ahsan Jan, 1988 p.14





**Figure 6.1 - Carved Plaque of Nachna Haveli Facade**



In the case of Nachna *haveli* in Jaisalmer, a carved sandstone plaque showing the *haveli* façade still exists in the lobby (Figure 6.1). This was made for the final approval of the façade but it was never completed. This example shows that the practice of making model façades for approval was also prevalent at the time. Although the plans or elevations were not made on paper, the idea was communicated by the master mason to the client either on site or by making model façades or by showing other *havelis*. A practice that is still followed in contemporary construction despite the making of architectural drawings. The average Indian client still has difficulty in comprehending plans on paper. One of the *havelis* covered in the fieldwork (Mathur *Haveli*, Jodhpur) was also called *Patta-naveez ki Haveli* as the owner made *pattas* (plot layouts with dimensions) for the ruler.

For the construction of *havelis*, expert masons (called *mistris* or *chejaras*) and *beldars* (labour) were responsible for the execution of the basic structure. The plinth, walls and roofing was done on site and prefabricated stone elements like brackets, columns, *tibaris* were also fixed by *mistris*. The work could be either given on contract (*theka*) to a master mason who was responsible for procuring the material and supervising other *mistris* and labor. In most cases, a traditional master mason was associated with each *haveli* and his descendents would take care of the construction work for the next generation of the owner. The other method was to get the work done on *dehari* i.e. daily wages. In that case, the owner would procure the material and control the *mistri* and the labourers. These two practices are still prevalent in any construction work. For finishing work, expert masons and carvers were called on. The Bombay Gazzeteer (1901) mentions the carpenter castes called *suthars- ahirs, gujjars, Mevada, Pancholi, Marvadi* and *Vaish*. Amongst these *Mevada* and *Marvadi* indicate origin from



Mewar and Marwar regions of Rajsathan. Besides these each area had its own experts for finishes like *silawats* or stone carvers in Jaisalmer and Marwar region and *chitera* or painters in the Shekhawati region.

### The Units of Measurement.

The *mistri* often kept a reference book as mentioned by Kalyan, a *mistri* in Jaipur who follows a Vishvakarma book in Hindi language, published in the early 20<sup>th</sup> century that also incorporates modern systems. He learnt the principles of construction from his *guru* Narain Ji Kumawat. The name *Kumawat* is associated with the mason class in Dundhar region of Rajasthan. Kalyan mentioned that all dimensions of construction are related to '*kaaya*' i.e. the human form. Although he specified *hasta* and *angula* as units of measurements, he further added that a '*paniyaari chaal*' i.e. width of a normal step was equal to a *hasta* and the masons used this for measurements on site. According to him, twenty steps in one direction and another twenty in a perpendicular direction marked an area of 1 *bigha*. Bhonri Lal Kumawat, another traditional mason from Lalgarh, Bassi mentioned that the unit of measurement used was 1 *imarati gaz* equivalent to 24 *tasu* and 1 *tasu* = 11 *sut*, 1 *sut* = 1/8". '*Sut*' is the smallest dimension still used by masons and architects on construction sites. These masons also used a modified version of soil testing similar to the one prescribed in the texts. This indicates that the textual rules were reinterpreted and modified in the working environment by the *mistris*

In the case of Jaipur city, specific terms for measurements were used. '*sawaya*' –(a quarter extra) is expressed in complete planning and details of Jaipur. Even the allotment plans of Jaipur show rectangular plots reserved for special people



were one quarter extra.<sup>7</sup> Roy also mentions strict building byelaws in Jaipur to control the height of building, height of ground floor and building byelaws. Similar 'sawaya' terms were used in measurement of courtyards, plots and rooms. *Mistri* Kalyan in Jaipur quoted '*jaag sawaya kothi puni*', a local *Dundhari* phrase for construction of a house and a well. '*jaag*' and '*kothi*' mean a house and a well respectively and '*sawaya*' and '*puni*' are quantitative terms indicating a quarter extra and a quarter less than the whole value. The phrase means that for construction of the house, one should entirely use dimensions that are a quarter more than a whole number. So the dimension of a side of the court or a room would be taken as 10'3" rather than a whole number of 10'-0 (or equivalent measures in *gaz*). Similarly, in the case of a well, the dimensions would be a quarter less.

**Table 6.1**

<u>Units from the text</u>	<u>Units given by the Masons</u>	<u>Equivalent in Inches</u>
<u>'Rajvallabha'</u>		
	1 <i>Sut</i>	1/8"
1 <i>Angula</i> – Width of the middle phalange of middle finger		3/4"
	1 <i>Tasu</i> = 11 <i>Sut</i>	2 3/4"
1 <i>Hasta</i> = 24 <i>Angula</i>	1 <i>Paniyari Chaal</i> – A Footstep	18"
	1 <i>Gaz</i> (15 <sup>th</sup> century)	22 1/2 "
	1 <i>Imarati Gaz</i>	33"
	1 <i>Bigha</i>	Area enclosed by 20 steps of ' <i>paniyaari chhal</i> ' in perpendicular directions

<sup>7</sup> Roy, A.K. *History of Jaipur City*, p.65



Table 6.2 at the end of this chapter, explains the construction terminology used by the masons in Rajasthan.

## The Rules of Grammar

‘At every stage the artist will delight in rules, as the master of language delights in grammar, though he may speak without constant reference to the treatise or syntax.’<sup>8</sup> A fact that became evident after interviewing a few traditional masons in the Rajasthan region. Each mason or carver had their oral rules quoted in local language phrases. A *haveli* in Rajasthan could be built in stages as the Bade Devta *Haveli*, Kota. Rama Mehta (1977) also describes the building of Sangram Singh’s *Haveli*, Udaipur in different stages with the servants’ court being constructed at a lower elevation in the end. Or it could be constructed at one time like the Marwari traders *havelis* in Shekhawati region. But in either case, the masons followed the rules of grammar. This section describes a few of the rules that were discovered in interviews with the traditional masons.

### a) Demarcating the Centre in a *Haveli*

According to the construction norms mentioned in *Salumber ka Itihaas* (Vimla Bhandari, 1999) one had to construct on all sides of the plot with no open space around the built up. This is evident in the construction of all *havelis* in Rajasthan. The geometry and proportion of the court usually determines the interior planning, while the property configuration usually organizes the exterior.<sup>9</sup> Thus the boundaries were primarily established with the available size of the plot.

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<sup>8</sup> Coomarswamy, Anand K, 1974, p. 24

<sup>9</sup> Henrichs, Craig. 1989, p.12



The centric evolution of the form has already been discussed in ritual and formal analysis of the *havelis*. But, marking of the centre was the primary step in construction process too. Mistri Kanhiya explained the traditional method of demarcating the court centre in a plot, which is called '*awani*' in local language (Figure 6.2). He also explained that the front side of the court was always kept a few inches less than the rear one. In the case of single court *havelis*, there were definite rules of proportion between the size of the plot and the size of the court (based on the method of central demarcation), as mentioned by *mistri*, Bhonri Lal Kumawat who gave the following proportion measures for the court in Jaipur area:

Plot Size (in <i>Imarati Gaz</i> )	Court Width
11 ¼ x 14 ¼	4 ¼ <i>Gaz</i>
12 ¼ x 15 ¼	5 ¼ <i>Gaz</i>
14 ¼ x 17 ¼	7 ¼ <i>Gaz</i>
16 ¼ x 19 ¼	9 ¼ <i>Gaz</i>

This clearly shows that there is a difference of seven *gaz* between the width of the plot and width of the court in each case. Dividing this into two bays on either side of the court, one arrives at 3.5 *gaz* equivalent to 9'8" corresponding to the width of the stone slab that was used to span the built form on each side of the courtyard. Another mason, *Mistri* Lalit from Govindgarh gave this formula for the courtyard: '*teen-terah, aath-atharah*' (literally, 3-13 and 8-18), indicating that the size of the court can vary from a width of 3 *gaz*-13 *gaz* and length of 8 *gaz* -18 *gaz* depending on the size of the plot. In multi-court complexes, too, there must have been similar rules to determine the centre of the inner court. Once, the inner court centre is demarcated, the whole complex would evolve from subsequent sub centres of other courts (Figure 6.2). In case of topographical variations on site, the centre or the inner court was always located



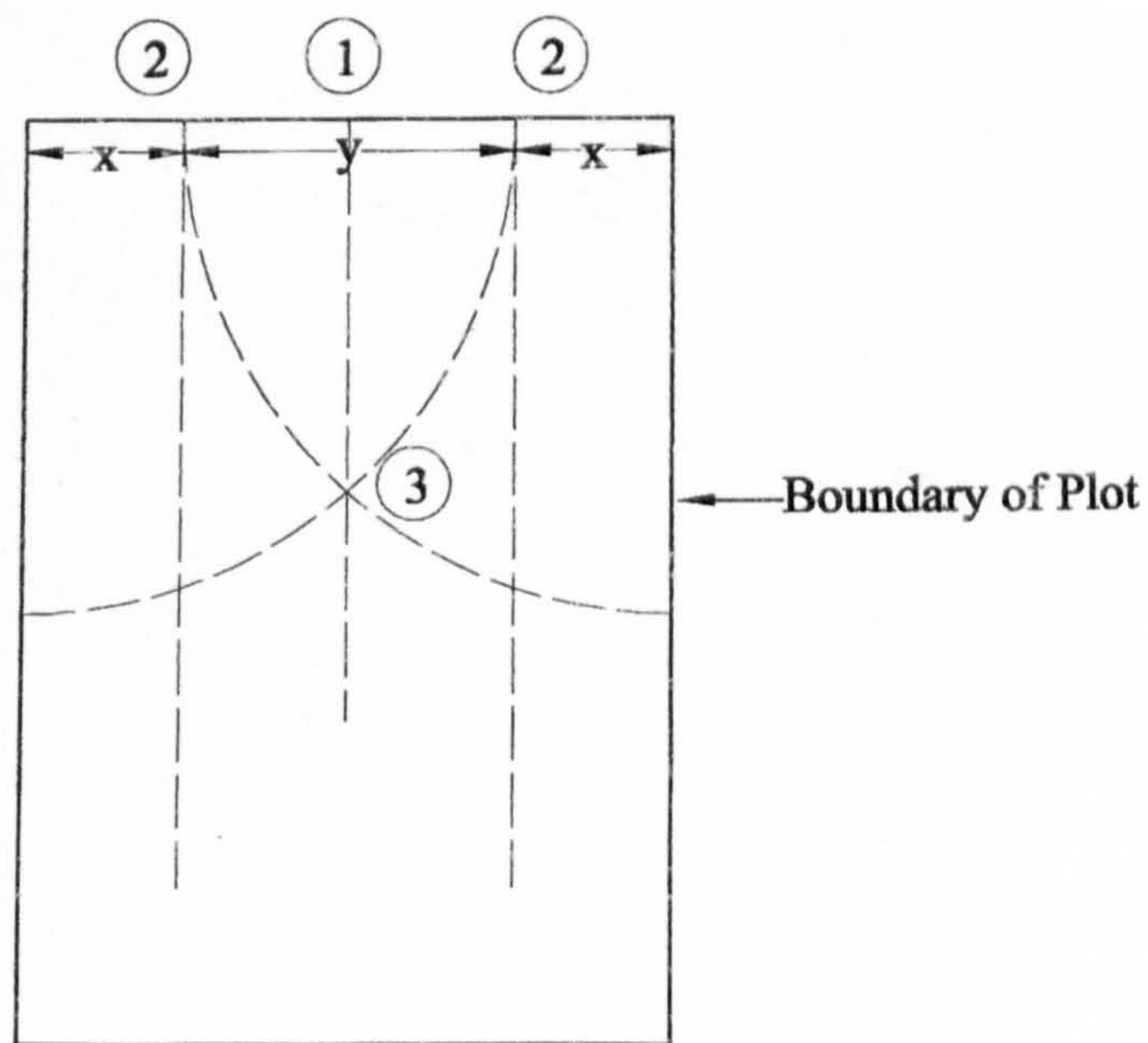
at the highest point on site, as observed in Amet *Haveli*, Udaipur; Pal Thakur *Haveli*, Jodhpur and Bhatt and Chaumoo *havelis* in Amber. Thus, in multi court *havelis*, the *zenana* or inner court was at the highest point followed by the outer *mardana* court and finally the servants' court and stables at the lowest level. The architectural layout reflected the social hierarchy and also maintained privacy in the right order. The central courtyard is the measure of the house as it reflects the dimensions of the site, the difference in level of various parts of the house, the site declivity and the symmetrical placement of the building.<sup>10</sup> Table 6.3 at the end of this chapter, shows the variations in the inner court dimensions in different areas of Rajasthan. In Godwad the spanning of timber beams was up to 7' hence the inner courts are small.

#### b) Centering rules in Details (Figure 6.3)

This rule of grammar is also followed in details as explained by *mistri* Lalit who makes stone *jalis*. According to him a stone carver follows three basic guidelines – 1) start from the centre, 2) select a design pattern in odd number and 3) create equal border on all sides. It takes a month to carve an intricate *jali* in a 2' x 3' piece. Rules of proportion for an arch were also explained by Lalit in the phrase - '*deda naag, sawaya puna, puni bagari*'. In this phrase, *naag*, *puna* and *bagari* are parts of arch and the other three terms indicate the dimensional norms. Another mason, expert in making *chattris* explained the parts of *chatri* as *kalash*, *onchahu*, *mochwa* and *kadiya*. A *chatri* was made with 4, 6, 8, 12, 16, 20, 32 pillars in sizes 2'x2', 5'x5' and 10' x 10'. The opening styles were named as – *chautar*, *bangridar*, *tabridar*, *chukkewala*, *tankabar* etc.

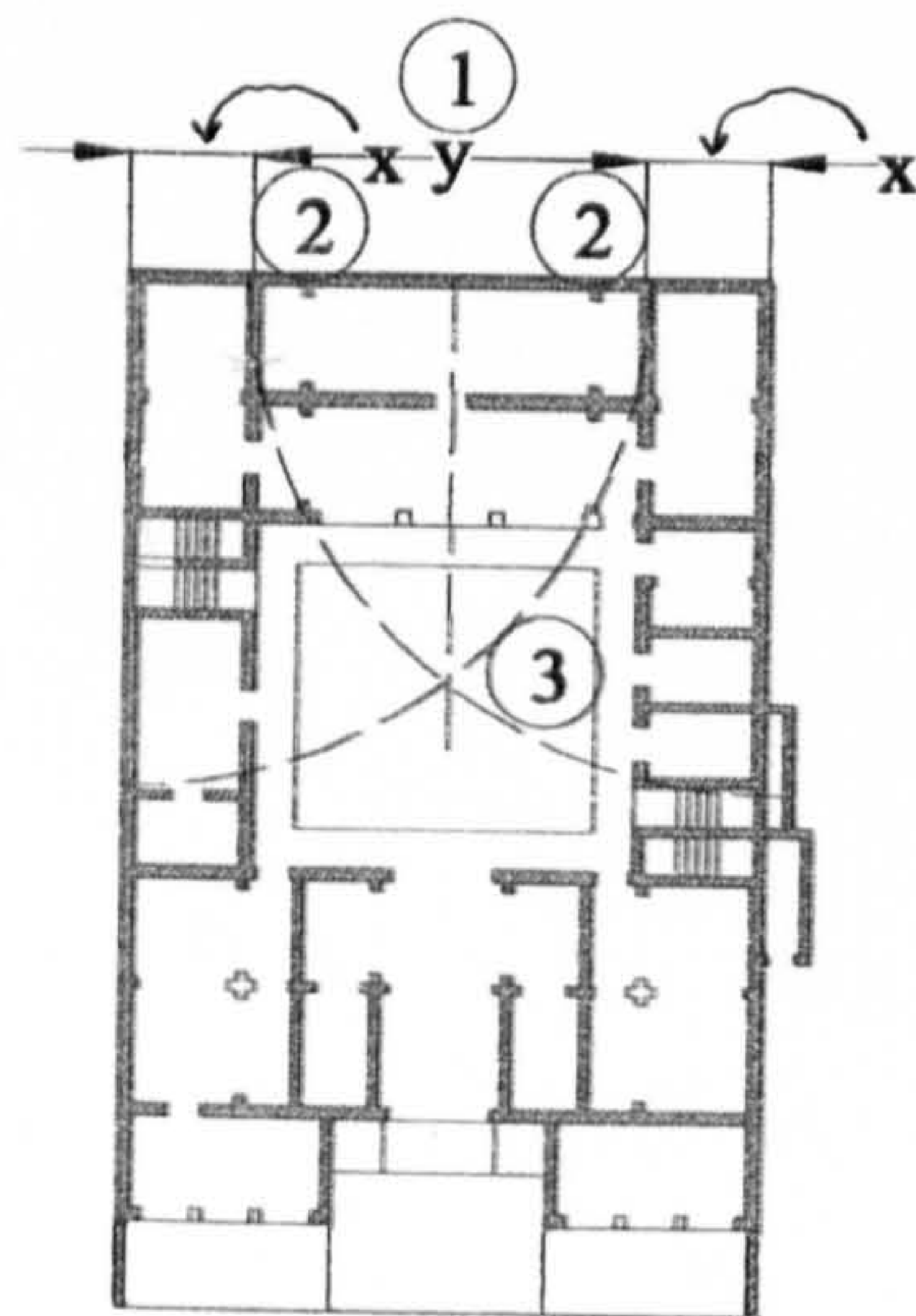
<sup>10</sup> Chakraborty, Vibhuti. 1994. p.57



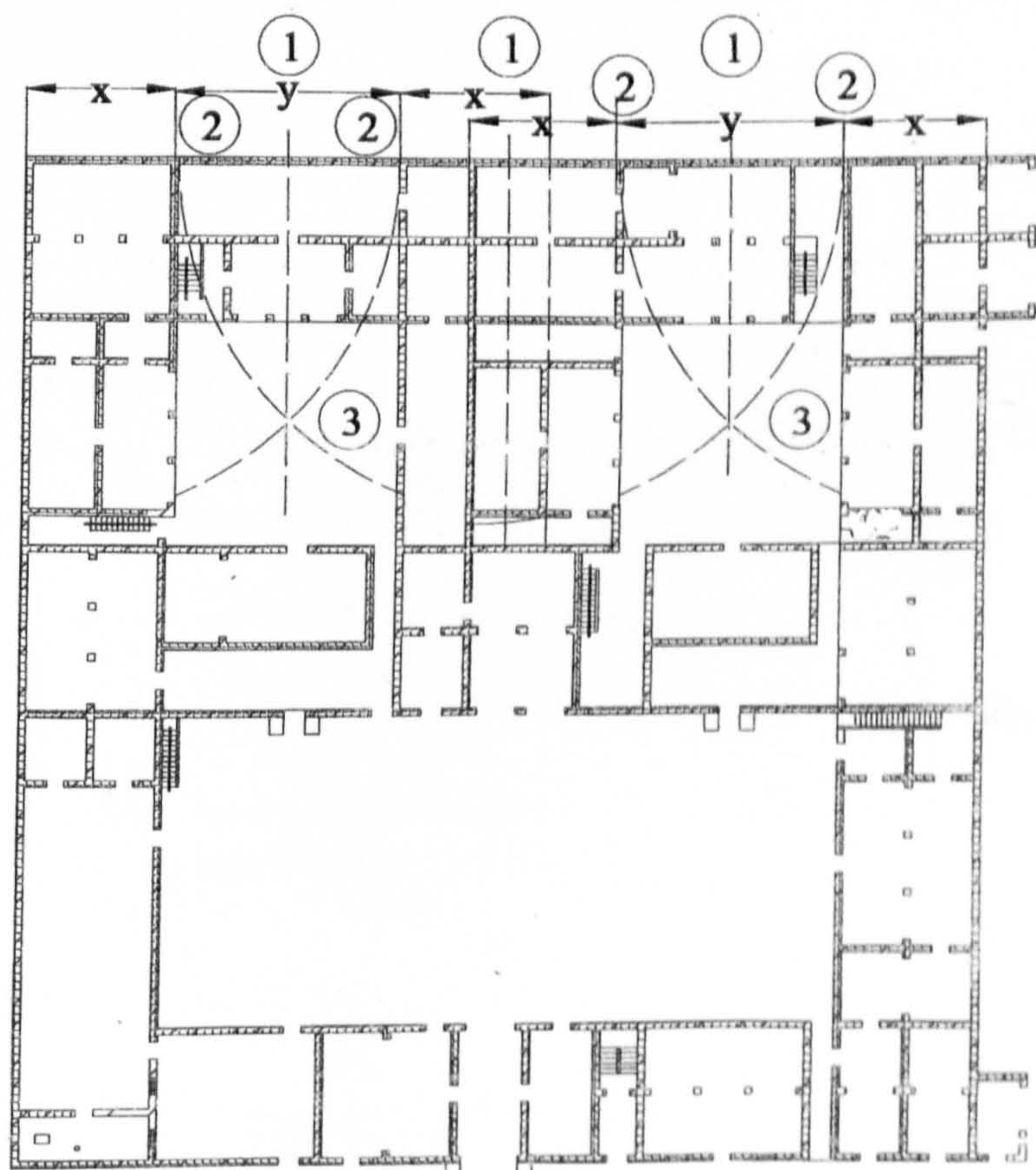


### Demarcations of Court Centre

1. Midpoint of the width of Plot is marked on the rear boundary.
2. Two points are marked at distance 'x' from the endpoints on rear boundary where 'x' represents the width of the covered wings on either sides of the court and is equivalent to the span of a stone slab or its multiples.
3. With endpoints as centre and radius ' $x + y$ ', two arcs are made on ground. The intersection of the two arcs marks the centre of court at (3).



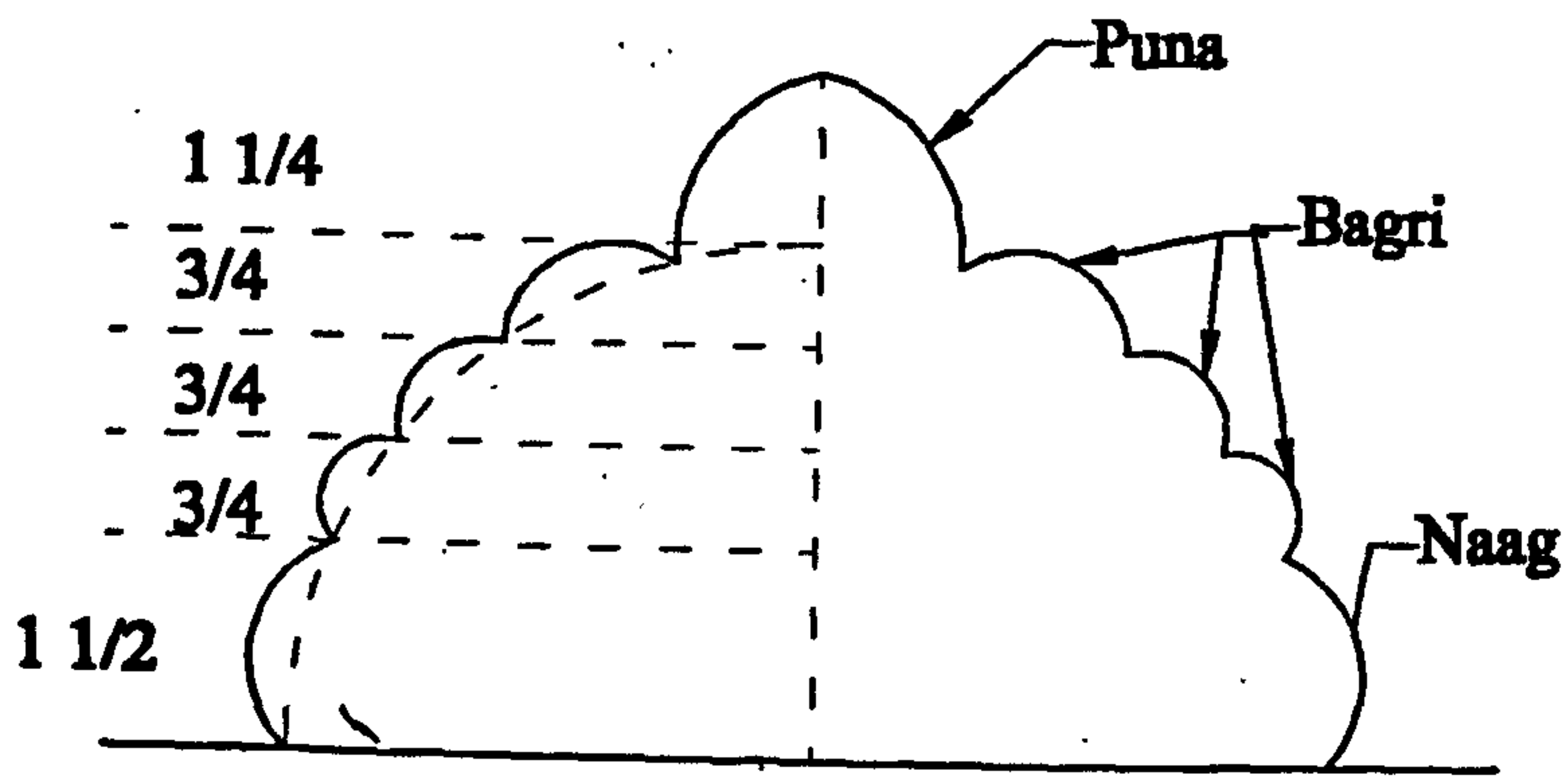
Single Court Haveli



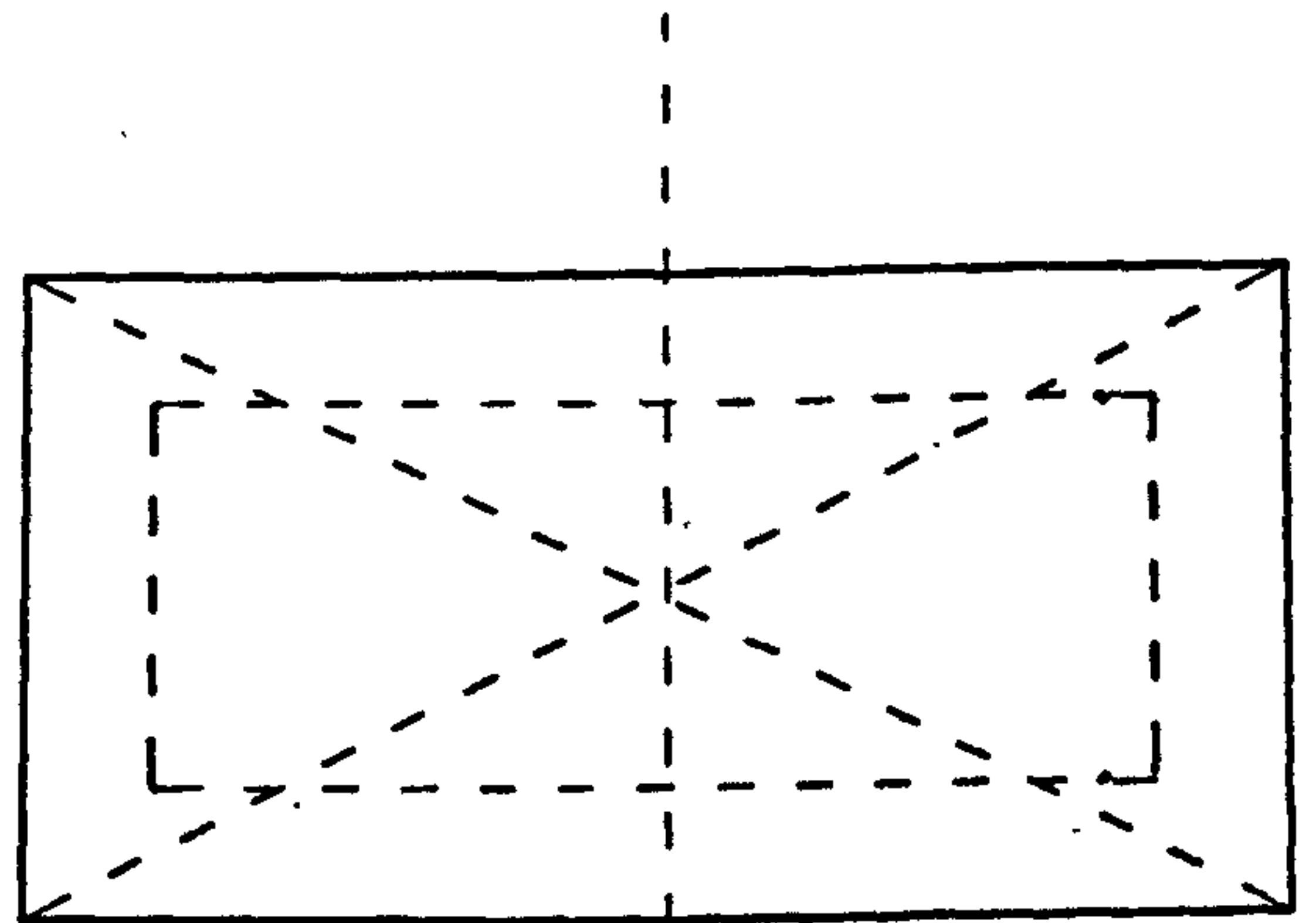
Multiple Court Haveli

Figure 6.2 - Rules for central demarcation or 'Awani'

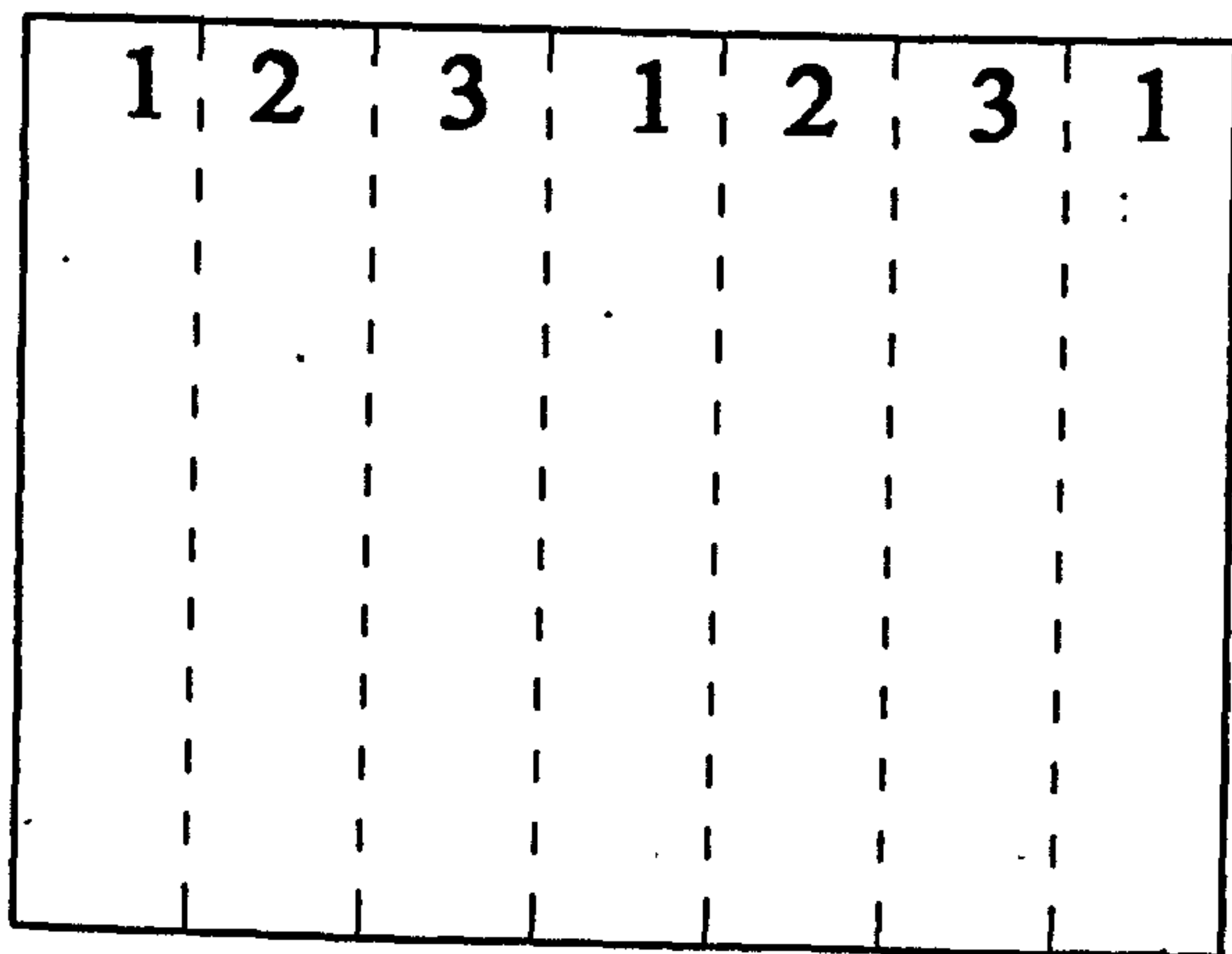




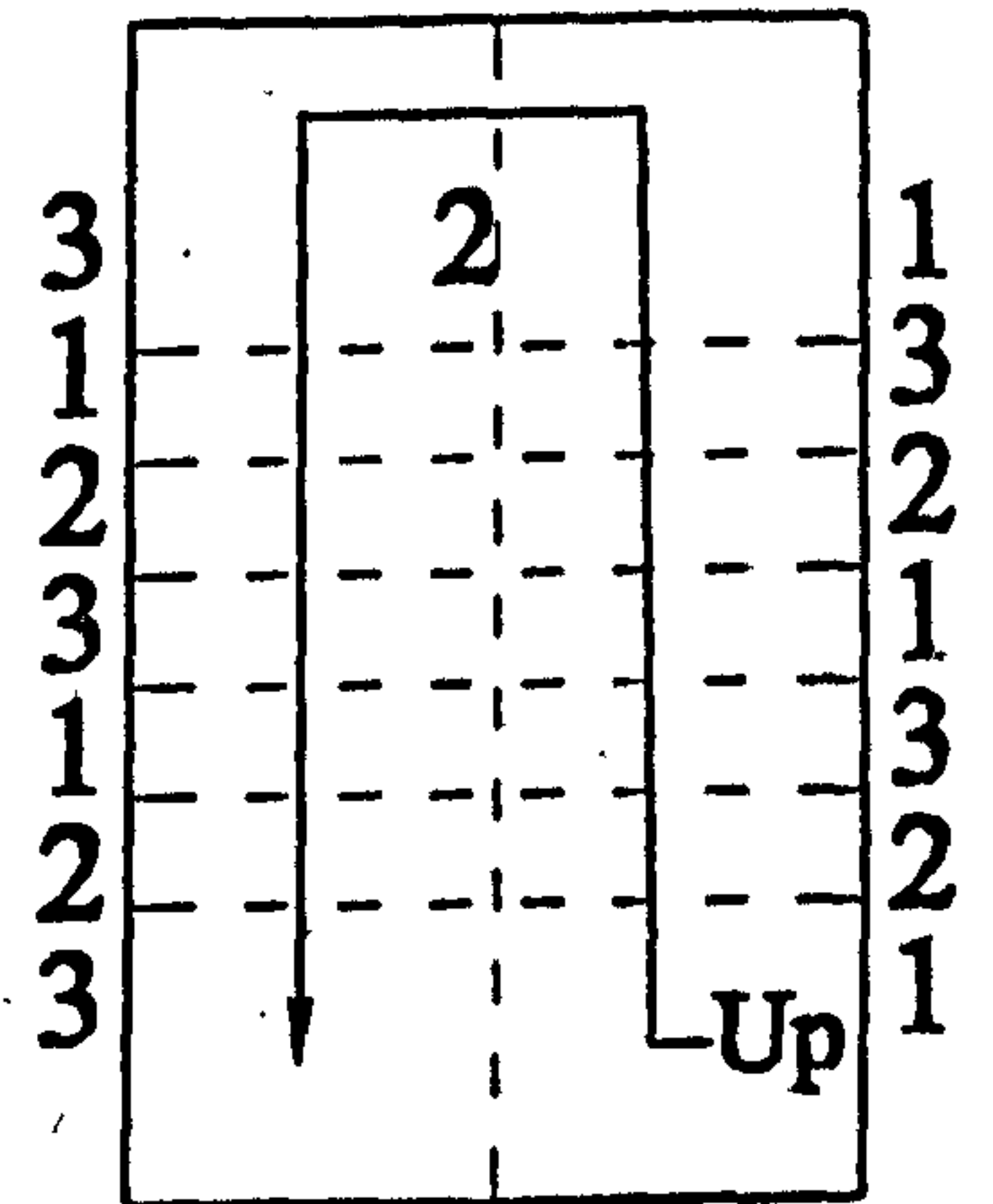
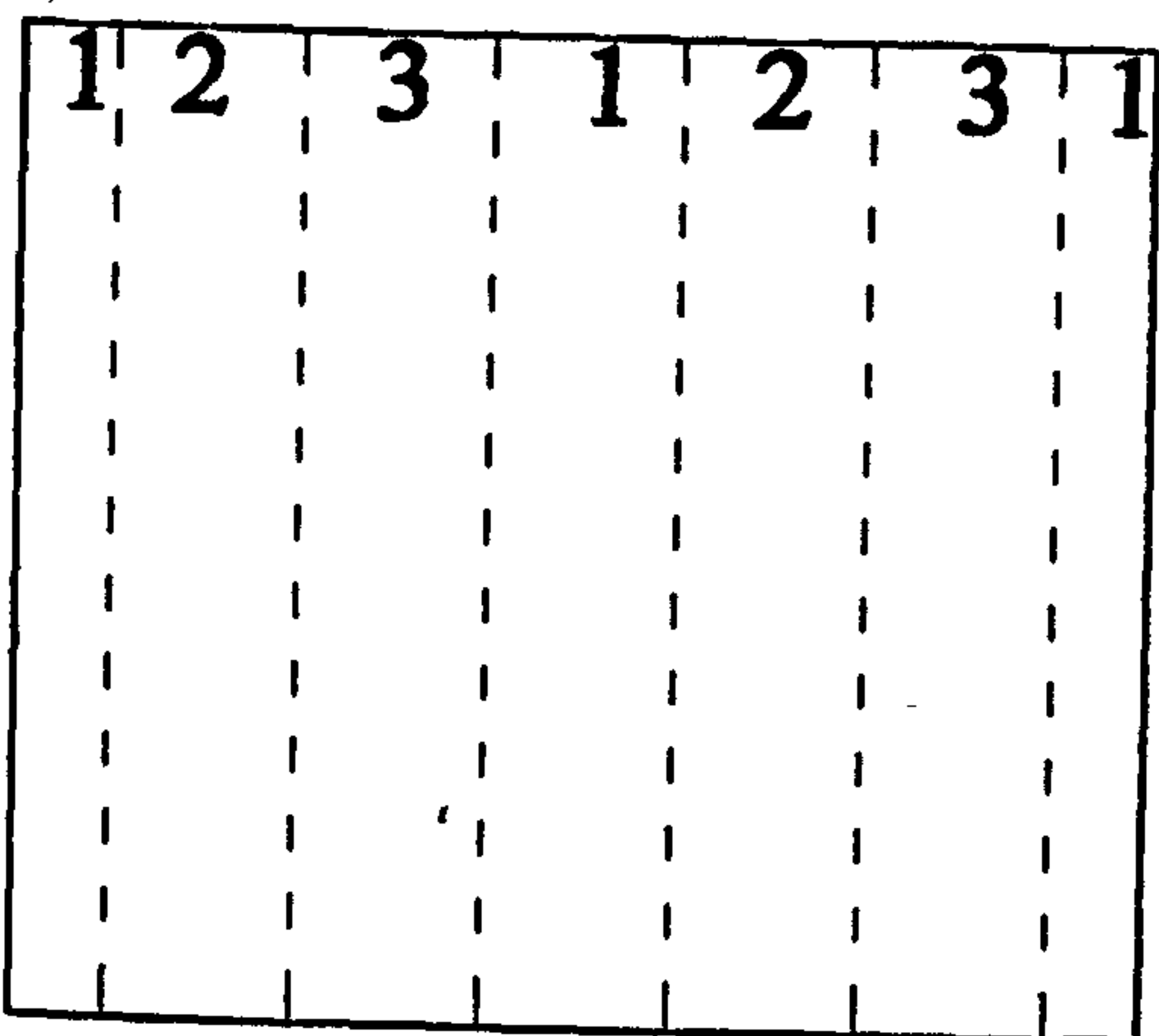
Proportions of an Arch



Rules for Jali carving  
(Mark centre, border and  
select and odd number pattern)



Rules for laying stone slabs  
in roofing. Number of slabs  
should be 4, 7 10, 13....



Rules for laying stone slabs  
in stairs. Number of steps  
should be 11, 14, 17...

Figure 6.3 - Rules for Costruction Details



Ideas of centre and duality were incorporated in construction vocabulary as explained by a mason in Jaisalmer about *Nar-Mada* (male-female) jointing of sandstone. The aspect of duality is also evident in the openings that always have double doors whatever the size of the opening. There were definite rules for construction work like laying of stone slabs as explained by Kanhiya (Figure 6.3). The number of slabs should be in arithmetic progression 4,7,10.. for roofing and the number of steps for stairs should be in arithmetic progression 11, 14, 17....and so on.

Thus the marking of a central reference point was the first step: whether it was the *mistris* location of the court centres or the carving of a stone panel. The odd numbered patterns were selected, as they are centric in nature. This indicates that the constructional norms also relate to the traditional Indian worldview of centric evolution.

### 6.3 Generic Principles for Construction

A number of parallels are found in the textual prescriptions and interviews. The *sutradhar* or *mistri* was aware of the basic *vastu* norms related to orientation, soil testing, proportions of the form, construction rituals etc. handed down by his *guru*. He often used a modified version of these rules depending on the site situation. An analysis of the textual guidelines and masons' interviews establish the following norms used in traditional construction.

a) Plots available for building *havelis* were proportional to the social and political hierarchy of the owner in a particular urban context.



b) Initial demarcation for beginning construction work was central not peripheral. Centric demarcation was a prerequisite whether in placing the deities on the *vastu* diagram as mentioned in the texts or in the beginning of any construction work from the markings on site to details like carving of a *jali*. These centric demarcations correspond to the centres and subcentres in the *haveli* spaces and façades.

c) Hierarchical norms related to floor heights and door heights, width and alignment were followed with the heights decreasing from ground to upper floors and from outside to inside even if the difference was the smallest unit of 1 *sut*.

Beyond these basic principles, it was the sub regional variations in available materials that determined the architectural form.

## 6.4 Sub Regional Variations in Construction

Researchers have established the evolution of stone construction from earlier timber types. According to Pramar(1987), in the absence of monumental timber architecture, one should study the domestic wooden architecture for construction details. Rajasthan region, abundant in stone, shows evidence of stone temples since the fifth century. Stone and brick construction in Rajasthan can be traced to the Indus Valley civilization. This evidence of stone construction for centuries indicates that it must have developed its own vocabulary with time. Although the use of timber is found in a number of Rajasthan *havelis*, it was never used structurally, as in the neighboring state of Gujarat. In some cases, a horizontal piece of stone is used in a similar manner to timber reinforcement. Initially, masonry was reserved for palaces and temples. The remnants of rural form are



still evident in some Rajasthan *havelis*. In Udaipur, even for *havelis* to have a *pucca* roof on top, the permission had to be granted by the *Maharana* of Mewar. 'Jali' also has its origins in the lattice mats of reed and split bamboo.

In Rajasthan, the construction is load bearing with random rubble masonry or dressed masonry in locally available stone. In case of bigger halls, stone columns and beams are used. Stone brackets and stone slabs (*pattis*) are used for roofing. Foundation (3-4') and plinth are made in the local stone and lime mortar. The walls became very thin on the upper floors. In a few places like Alwar, the *havelis* had load bearing walls in brick. Initially, the roofing was done in timber (locally available like *khajur*, mango) in the same manner as in Gujarat *havelis*. This was observed in the *havelis* of Nathdwara and Marwar (Jodhpur, Jaisalmer, Sojat) region. In other areas of Rajasthan, stone slabs (*patti*) were laid across like planks for roofing. Again, the size of the room depended on the maximum available length of the slabs. In some cases stone beams were (*kurte*) put on the walls and slabs were placed on top. Construction technology in stone had developed from wooden structures - obvious in the tenon and mortise joints used in columns and tongue and groove joints used in stone *jali* work. But the stone architecture of *havelis* also picked techniques from Mughal construction slowly, developing its own vocabulary. Columns are square round and octagonal. Stone brackets are used in abundance for any projection. The deep stone walls allow the brackets to be embedded inside and makes the cantilevers easy. Stone slabs are directly placed over these brackets. Brackets are also used for spanning an opening: a practice that led to the formation of an arcuated opening commonly known as the 'false arch'. Although the corbelled arch was also used, the traditional mason still uses the arcuated method for making an arch (after an interview with Prabhu Dayal, master mason at

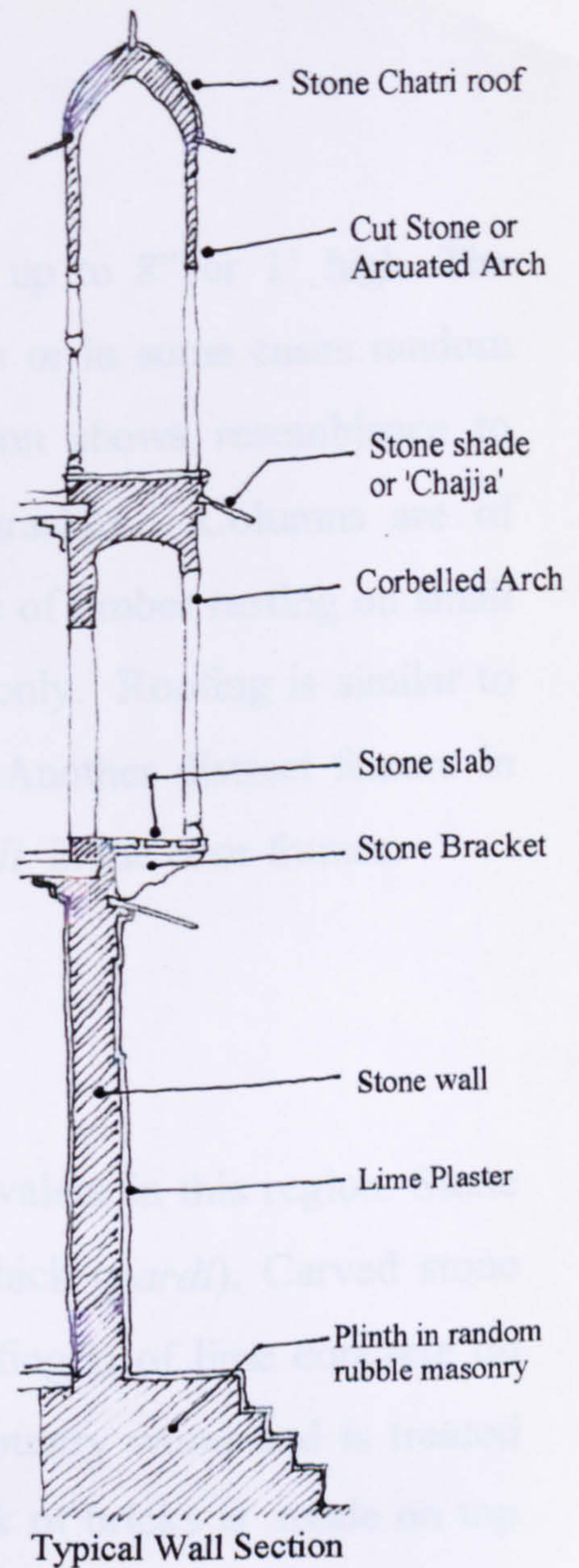
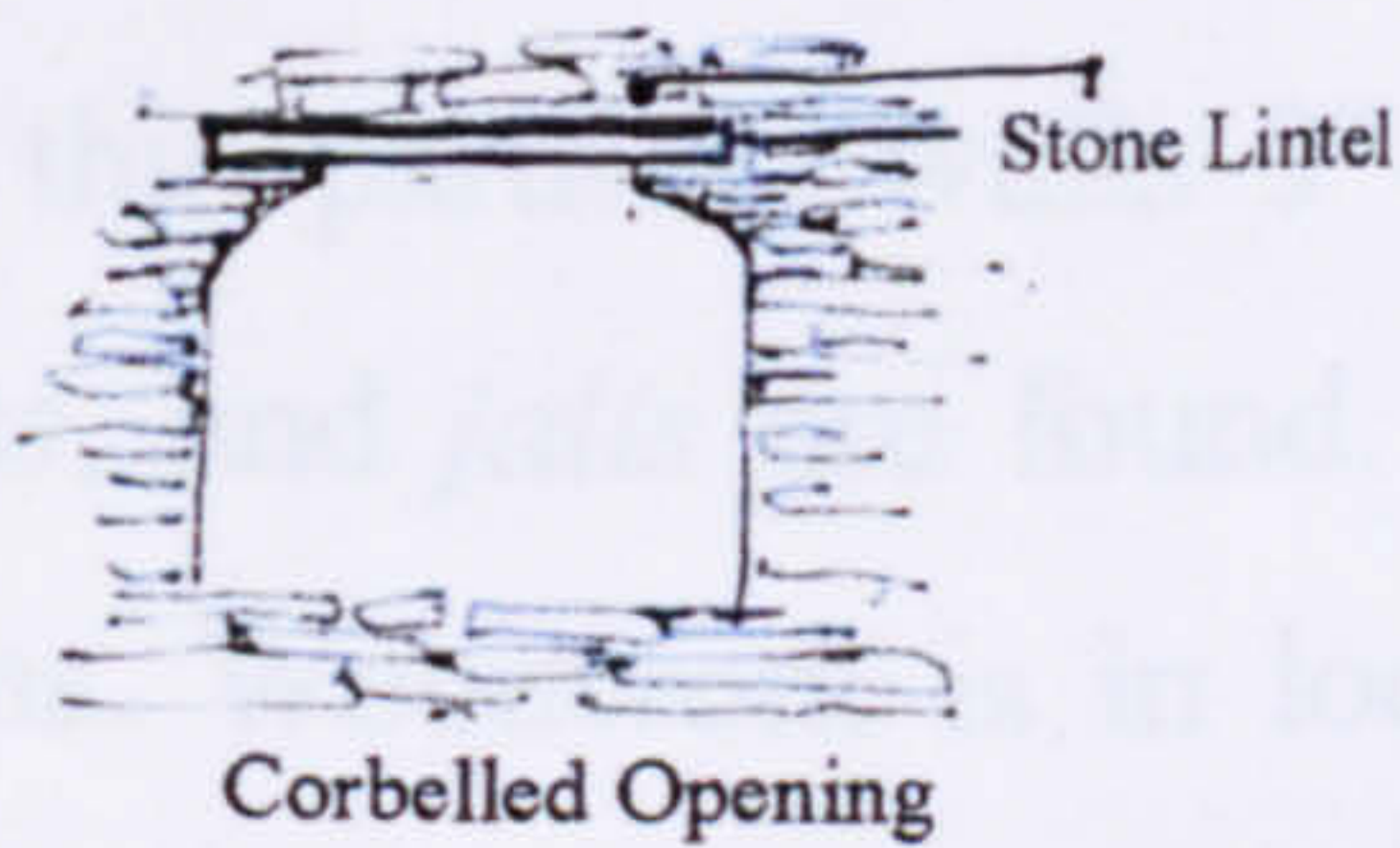
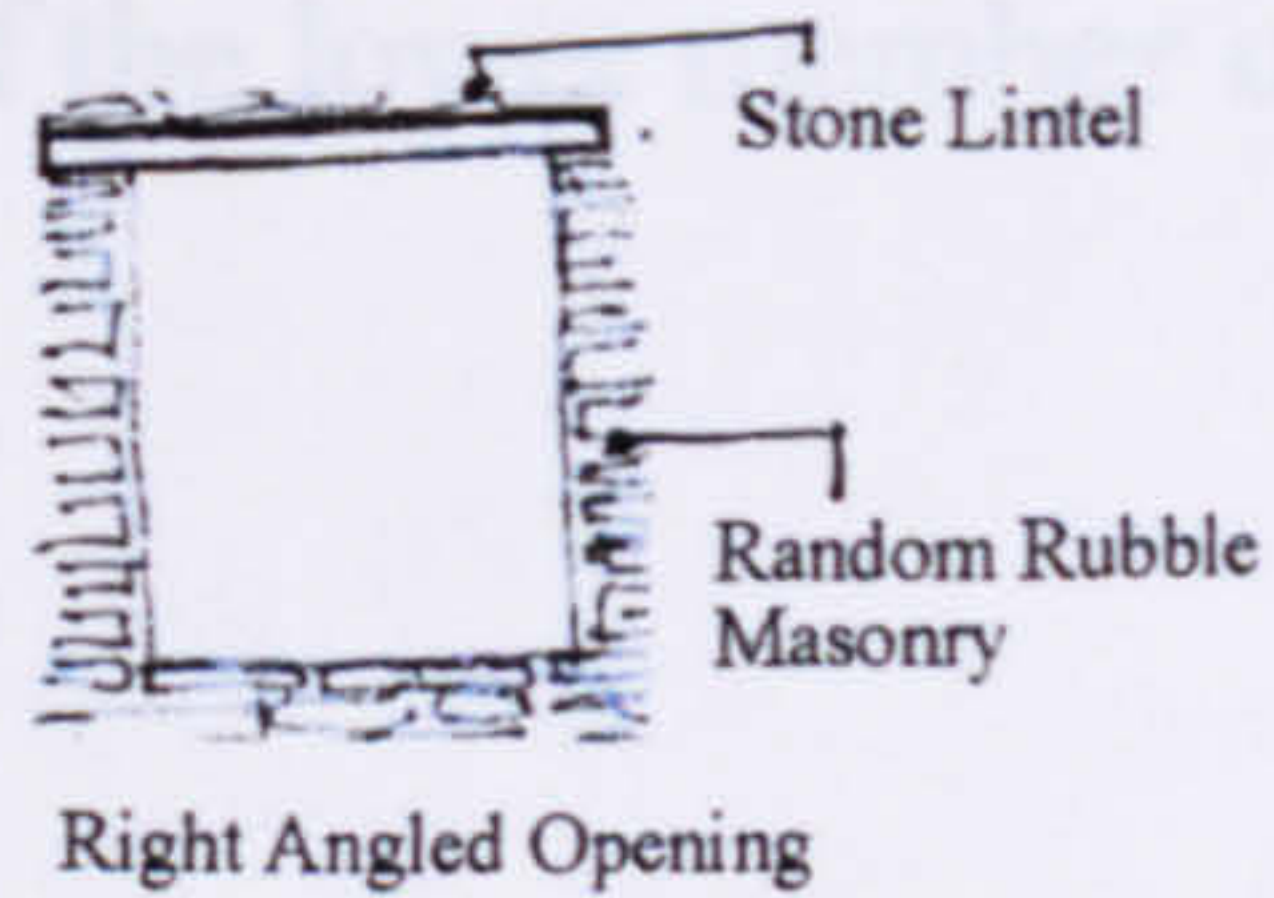


Chaumoo *Haveli*, Jaipur). Sub regional variations in construction existed due to the availability of materials. The changes in dimensions of the *haveli* form due to this are evident from Table 6.2.

### Dundhar Region (Figure 6.4)

In this region, masonry work is in grey metamorphosed stone in random rubble or dressed stone. Amber town is built with Ramgarh stone, which is higher in lime content. It is called '*Shisht*' stone. In Jaipur too, earlier structures are built in '*Shisht*' or from the stone quarries in Ghat ki Guni area. Later in the 19<sup>th</sup> century Bansi Paharpur stone from another neighboring area is used. Columns and lintels are also made of dressed stone and stone beams are used in the roof. Stone walls are on an average 1'6" thick and plastered with lime. Roof is also 1'6" thick, double layered with a layer of stone veneer with lime *kada* on it. Lime, jaggery and hesian are mixed together in the roofing plaster. This mixture is applied on stone slabs. A layer of *khora* or clay pots is then placed on it with stone slabs on top followed by damp earth. Then the final flooring is done. A layer of brick bats with lime mortar was placed on top. Floors were finished with lime plaster or marble plaster called *arraish*. *Aariash* work as floor finish and on walls is found in most *havelis*. Since the availability of timber in the Dundahar region is limited, the same principles of jointing are used in stone, which is found in abundance. The columns are either assembled with laterite stone or are monolithic with timber type joints. Since wood is scarce, doorframes and window frames are also of stone. Decorative finishes include mirror work, stained glass, mother of pearl inlay and silver inlay work.





Stone Door Frame and Corbelling in Stone



Construction in Random Rubble Masonry with Stone Frames in Openings



Stone Shade and Stone Columns with infill of Laterite Pieces.



Dove and Tail Joint in Stone Column

**Figure 6.4 - Construction Systems - Dundhar Region**



## Godwad Region (Figure 6.5)

The *havelis* in this region have a low stone plinth up to 8" or 1' high. The external walls are usually made of small sized bricks or in some cases random rubble masonry of local quartzite stone. This region shows resemblance to construction methods in Northern Gujarat and Saurashtra. Columns are of timber or stone. The *chajjas* are in most cases made of timber resting on small stone brackets. A detail that is unique to this region only. Roofing is similar to the Gujarat *havelis* with timber beams and rafters. Another distinct feature in the *havelis*, is the absence of the lower member or *dehli* in the door frames.

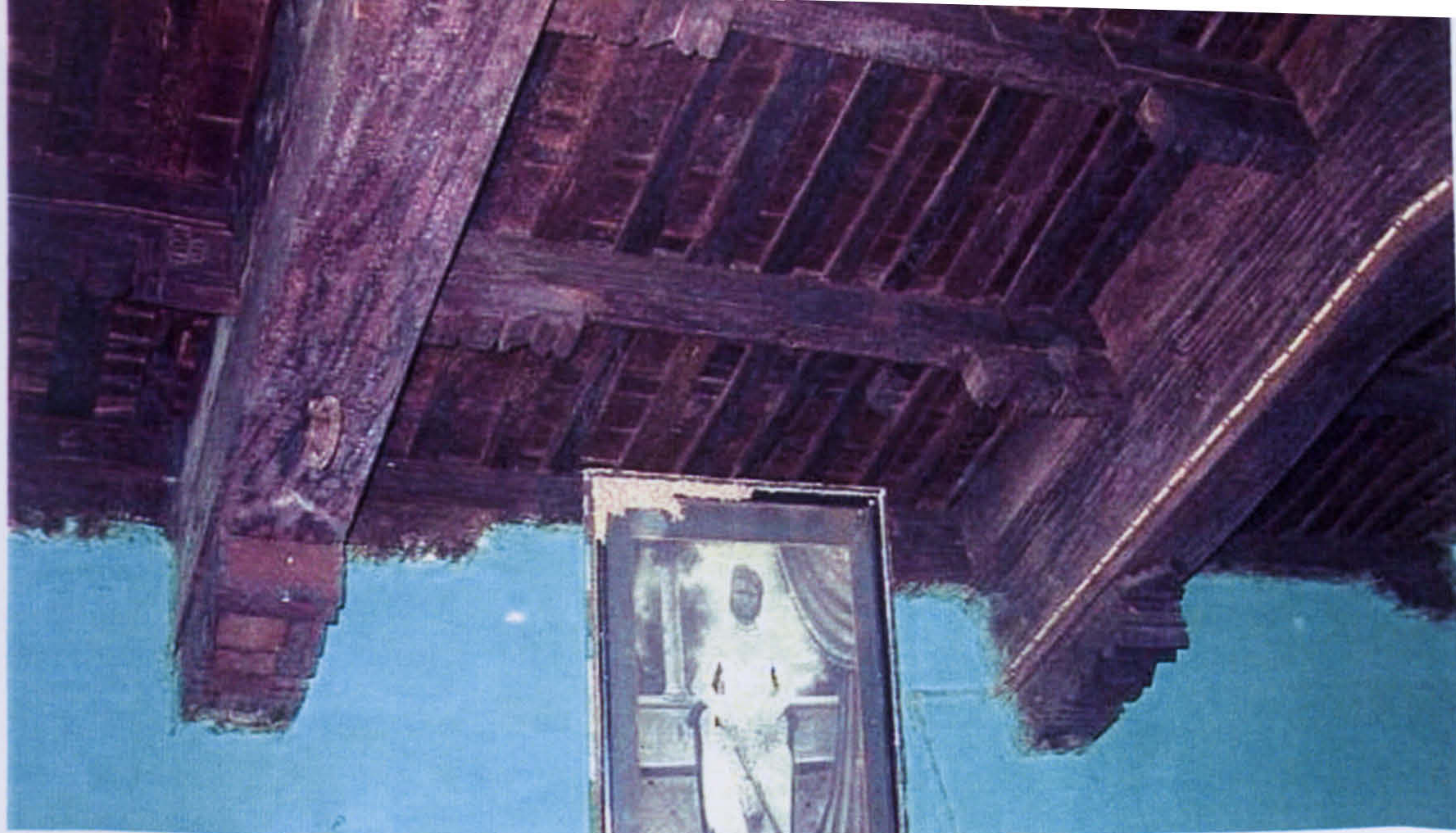
## Hadoti Region (Figure 6.6)

Stone as well as brick masonry in lime mortar is prevalent in this region. Stone panels are used in some thin partition walls 3"-4" thick (*pardi*). Carved stone columns, brackets, *chajjas*, and *jalis* are found. Roofing is of lime concrete on wooden battens and beams. Woodwork is in local country wood and is treated with oil. In some *havelis*, roof of *Karipat*- framework of bricks is made on top of *patti* construction made with *kholu* bricks (3"x3"x3/4") laid in lime mortar (1:3). Brickbats in lime mortar are placed on this and plastered with lime on top. Mixture of *methi*, *urad*, jaggery and jute in water is beaten with bamboo strips for four days. Another roofing method called *Ladanu* developed in Mughal times around 16<sup>th</sup> century is also observed.<sup>11</sup> Shuttering of wood and bricks in a shallow curved form over lime mortar constitutes 1' layer of *cento ka kara*. Next layer '*dat*' is a mixture of '*Khor*' (brick bats) and lime in equal proportion.

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<sup>11</sup> This information about construction in Bundi is from a dissertation, *Residential Architecture in Bundi* by Sanjay Bhardwaj. School of Planning and Architecture . New Delhi. 1990.





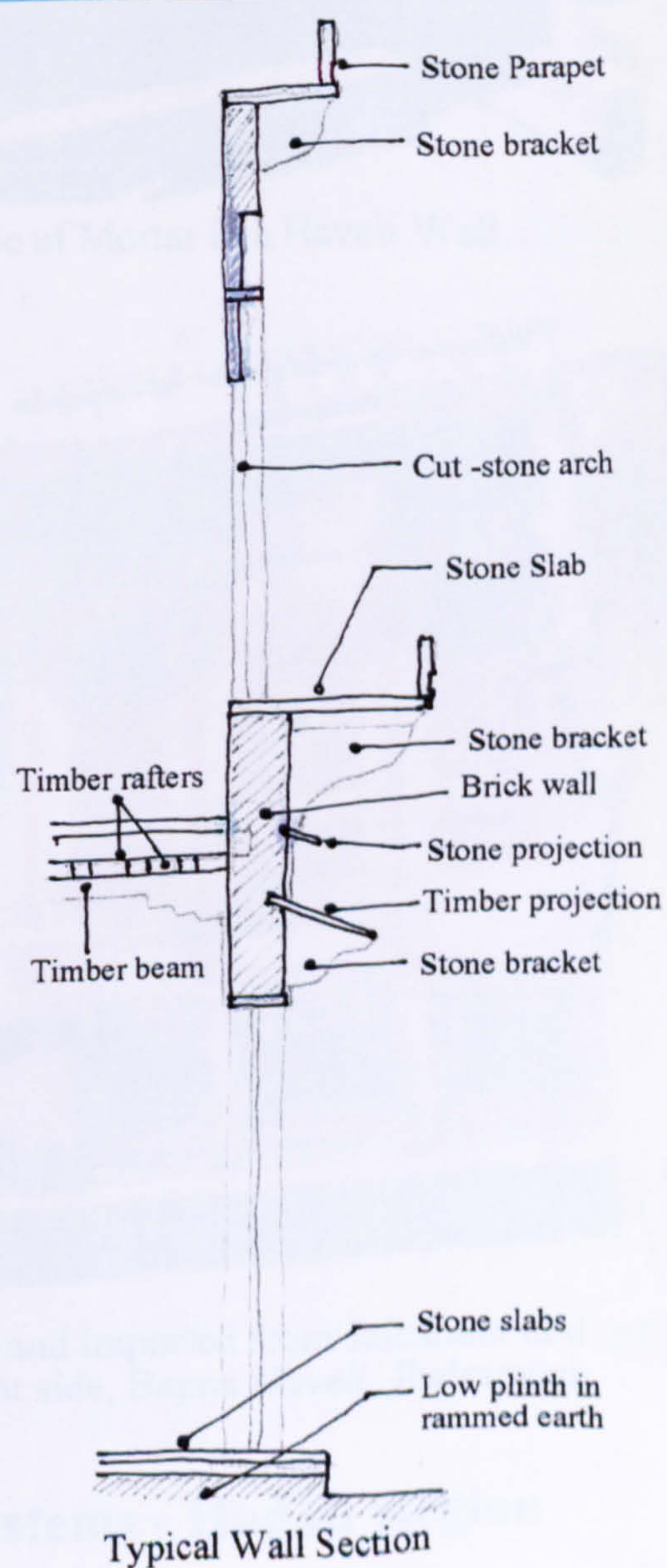
Ceiling with Wooden Beams and Rafters



Brick Wall with Timber Lintel in Central Niche  
(Wall is made of small bricks with central niche showing infill in larger bricks at a later stage)



Wooden Ceiling with Carved Edge Beam



Typical Wall Section

**Figure 6.6 - Construction Systems - Godwad and Vagad Region**





Random Rubble Masonry in Local Stone with Minimal Use of Mortar in a Haveli Wall,



*Jharokha* in Yellow Sandstone, carved and imported from Jaisalmer and *jharokha* in local red sandstone on right side, Bapna Haveli, Jhalrapatan

**Figure 6.5 - Construction Systems - Hadoti Region**



*Khor* and lime mixed with small strips of stone (with baked mud as a binder for stone) is laid over the previous layer in a circular and concentric manner, till a central point is reached. Here a keystone is laid. '*Dat*' layer is about 1' thick. Finishes of beaten lime plaster – '*sandla*' or fine lime are used. Marble lime called *Kauriyon ka choona* is also used. Locally available material in the region was used in most *havelis*. But, in a few cases, it was imported from another region. Import of material from another town is evident in the Bapna *haveli*, Jhalrapatan belonging to the descendents of the Patwas of Jaisalmer. The central *jharokha* was carved in Jaisalmer stone and brought to Jhalrapatan. The local stone carvers used that as a model to carve the two side *jharokhas* in local red sandstone.

#### **Marwar Region (Figure 6.7 a, b, c)**

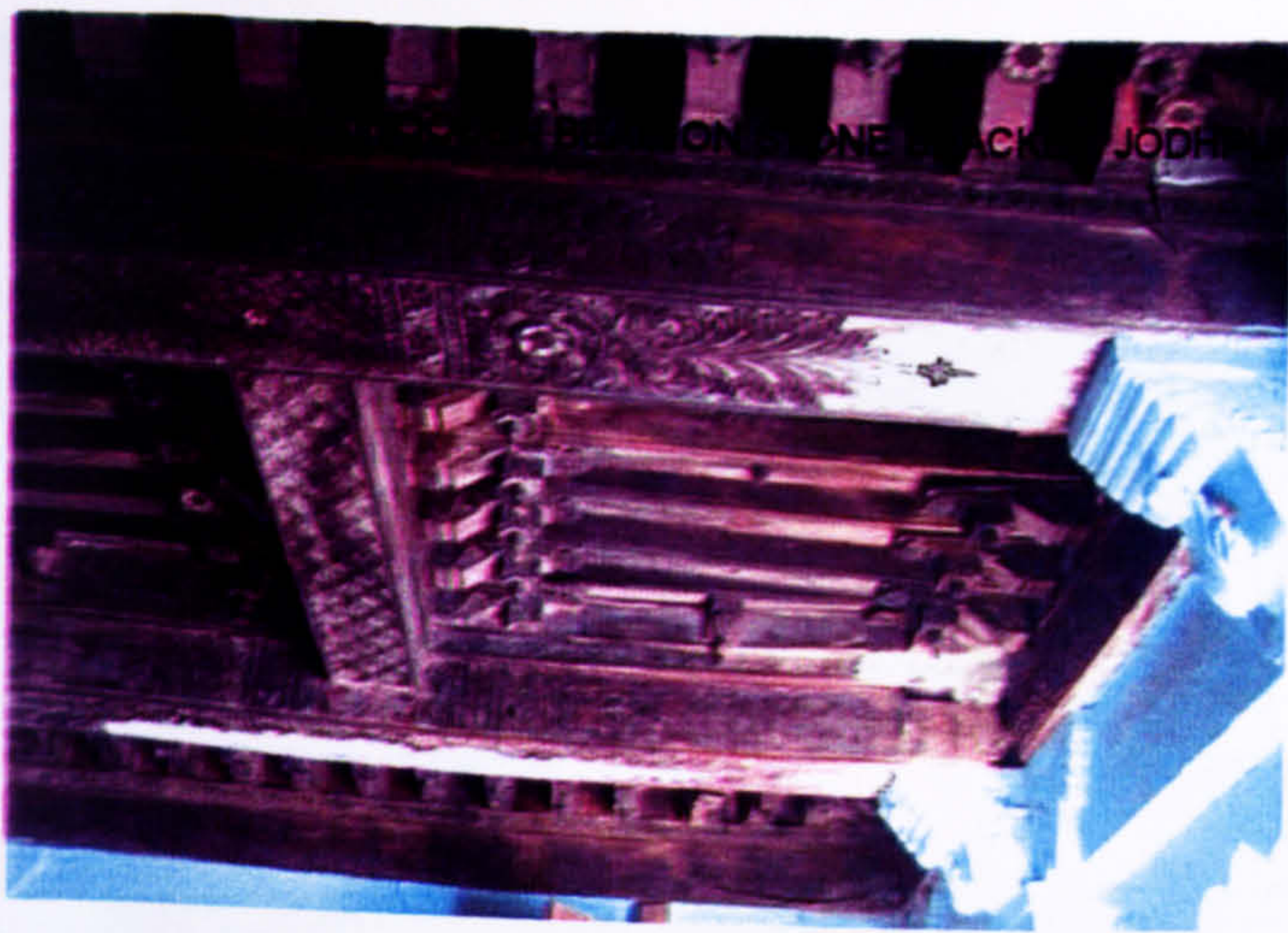
A rich variety of stone was available in this region. Sojat stone was found around Jodhpur, soft yellow sandstone in Jaisalmer from quarries amalsagar and moolsagar and red sandstone in Pokhran, Jodhpur and Bikaner areas. Masonry work is in the local stone with dressed stone masonry in most cases.

In the *havelis* of Jaisalmer, no mortar is used and it was the friction and gravity between the column and floor and beam and column that held the structure together. Columns had tenon and mortise or dowel joints (similar to construction of Gujarat *havelis* in timber). Structure is built of sandstone and limestone is used for carving. Sunand Prasad (1987) mentions that the yellow sandstone properties are similar to timber and it even has a grain like timber. *Havelis* in Bikaner and Jodhpur show similar construction in red sandstone with use of lime mortar. The *havelis* in Jaisalmer are constructed of thick blocks of the local



yellow sandstone, with thinner limestone panels in the more intricately carved areas. Prefabricated panels assembled with stone keys or iron cramps with no mortar are used. This method of construction makes the changing of building elements easy. The prefabricated unit can easily be replaced with another. The masonry panels are up to 1'6" in thickness and the limestone areas are about 2" thick. The ceilings are of timber construction. The beams span ten to twelve feet and are supported on masonry columns. Spans are increased with the use of masonry brackets, which spring out from the columns. The floors of the upper stories are lined with cow dung and mud plaster, whilst the ground floor is of sandstone. Sunand Prasad (1987) mentions details about the construction of Patua *haveli* in Jaisalmer. The foundations are of random rubble and rear and sidewalls are of plane ashlar. The bay structure imposed by these spans is of the same scale as that of timber. Local *Muslim* masons worked on Patwa and Nathmal *havelis*. Variations in stone carving include geometrical patterns, foliated scrolls and bird motifs. In Bikaner, the structure is in red sandstone with brick walls and timber roofing. *Jalis* are also of red sandstone. In Bade Miya *haveli* at Jodhpur, masonry is in form of a cavity wall (Rat trap type bond) made with 6" stone slab without mortar. In Pal Thakur's *haveli*, Jodhpur the plinth is 13' high from road level. The plinths are often high in the Marwar region with storage areas in the base. Nagaur stone carvers called *jhulaiya* worked on the carvings outside and local timber, Babul is used. Although, timber is not available now, but the earlier *havelis* in the region have timber roofing. In Jaisalmer, the timber roofing is topped with 1' sand for cooling. Wooden beams and ceilings are observed in most *havelis*. *Kejri* and *Babul* wood was used for timber work. Sweet lime is used for internal wall finish. Geometrical patterns such as checks, hexangons and octagons are found in lattice work.

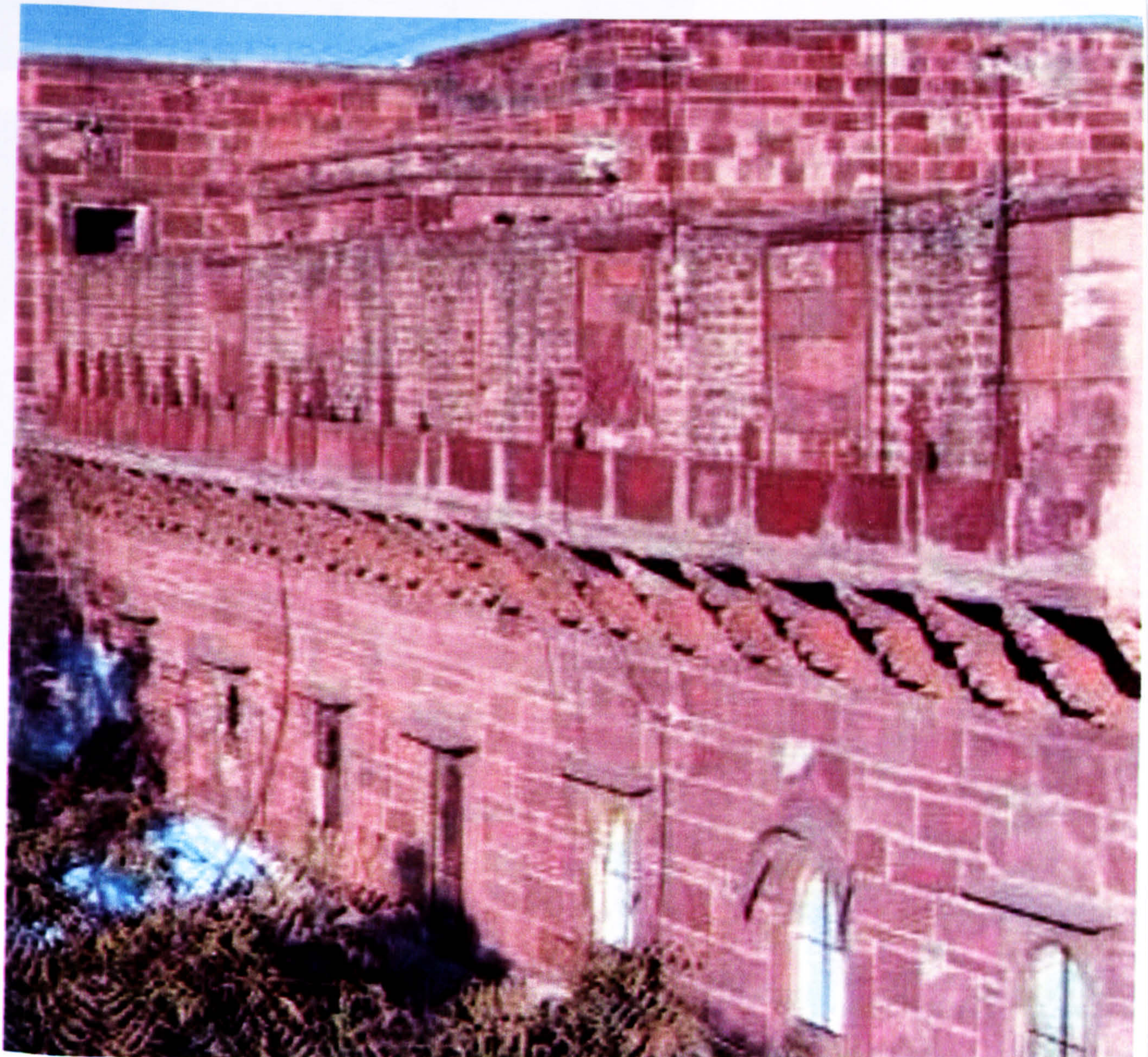




Carved Wooden Ceiling, Sojat



Wooden Beam on Stone Bracket



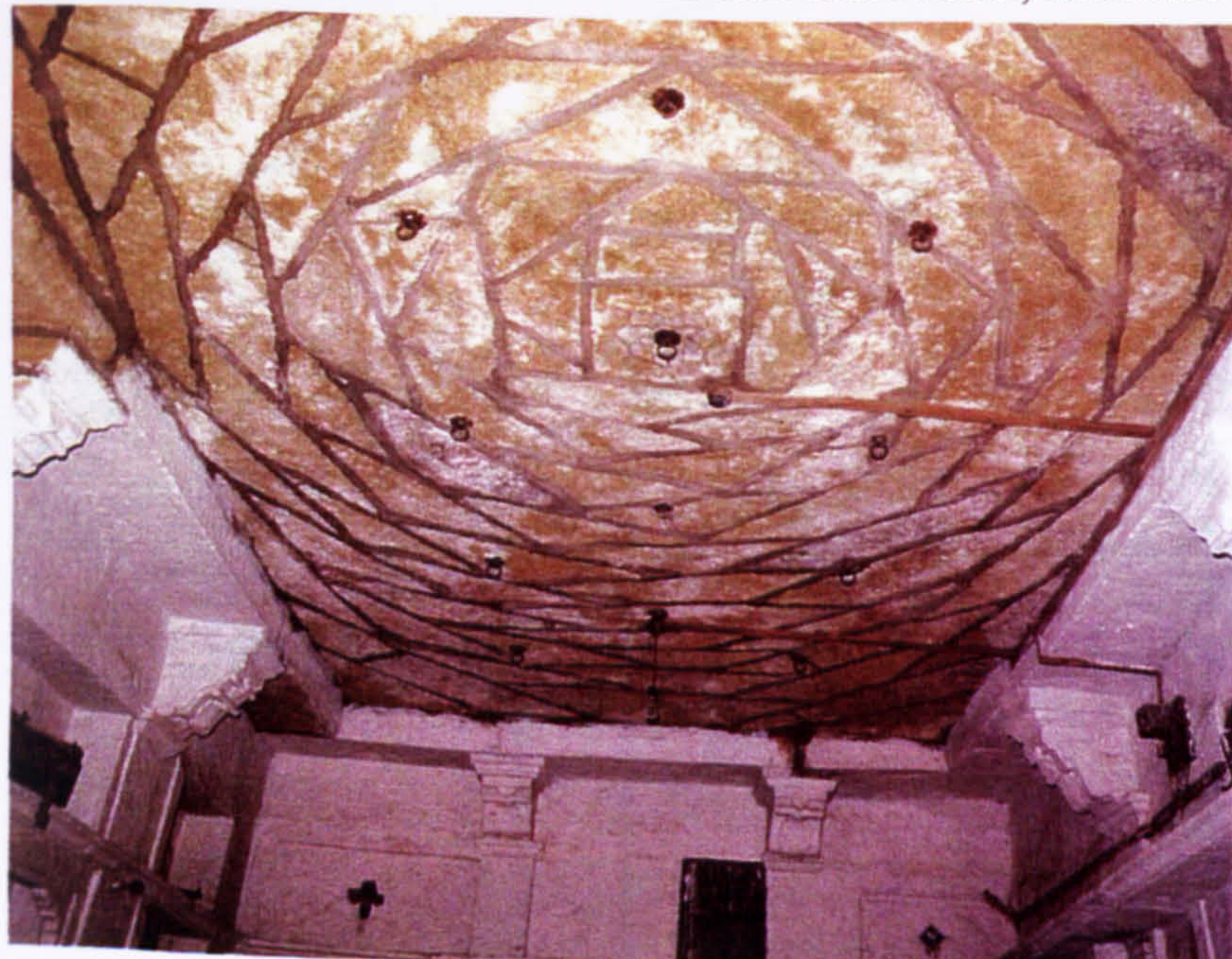
Stone Walls with later infill in Bricks, Bade Miya Haveli.

**Figure 6.7a - Construction Systems - Marwar Region**

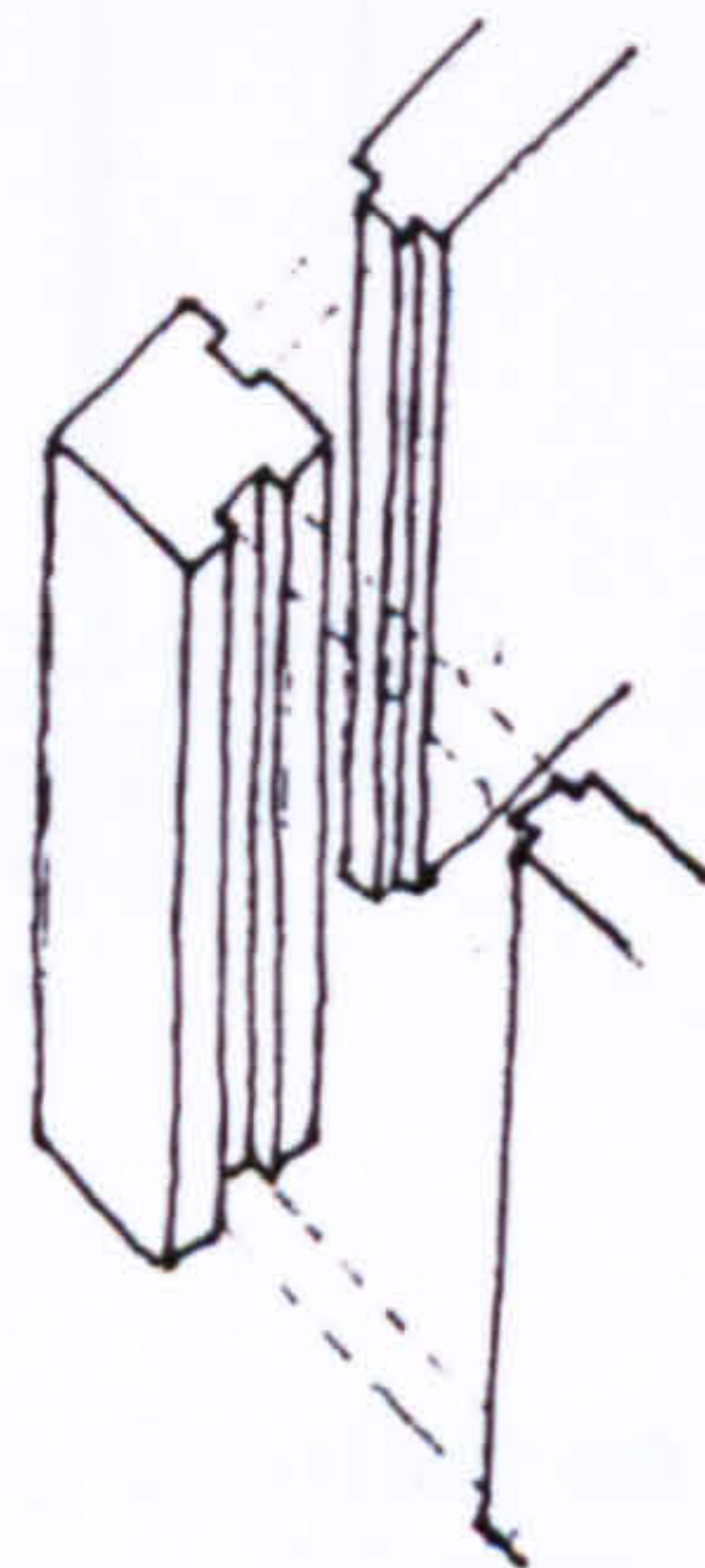




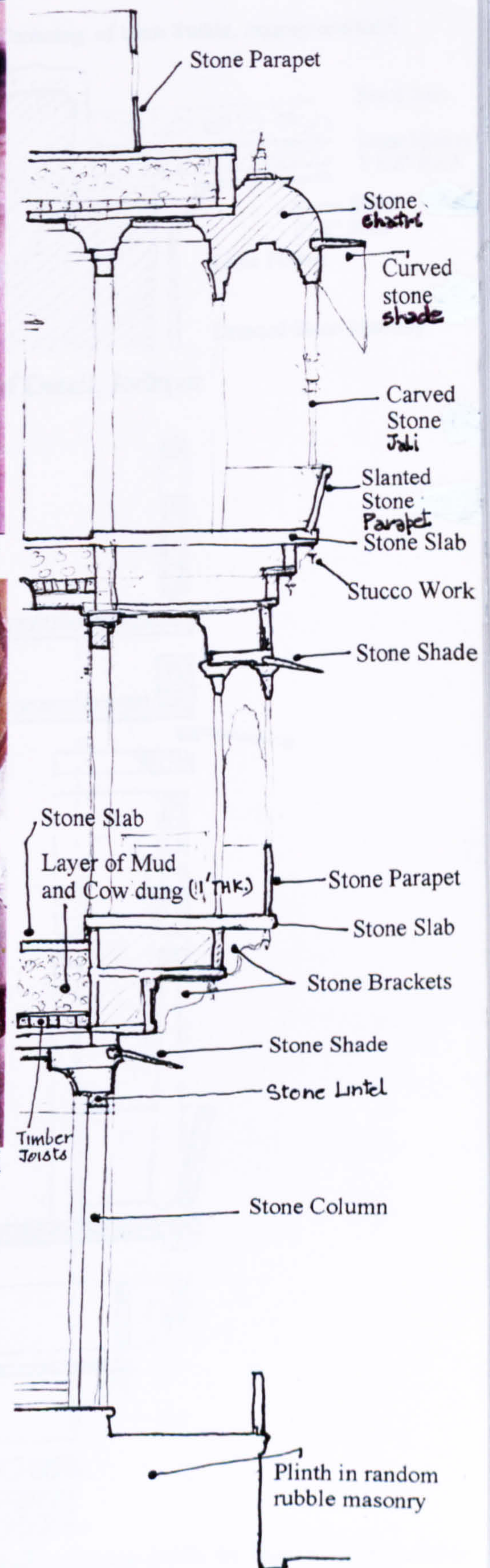
Stone Columns and Infill Slabs, Jaisalmer



Stone Roofing in Diwan Nathmal's Haveli  
(T.S. Randhawa, 1999)



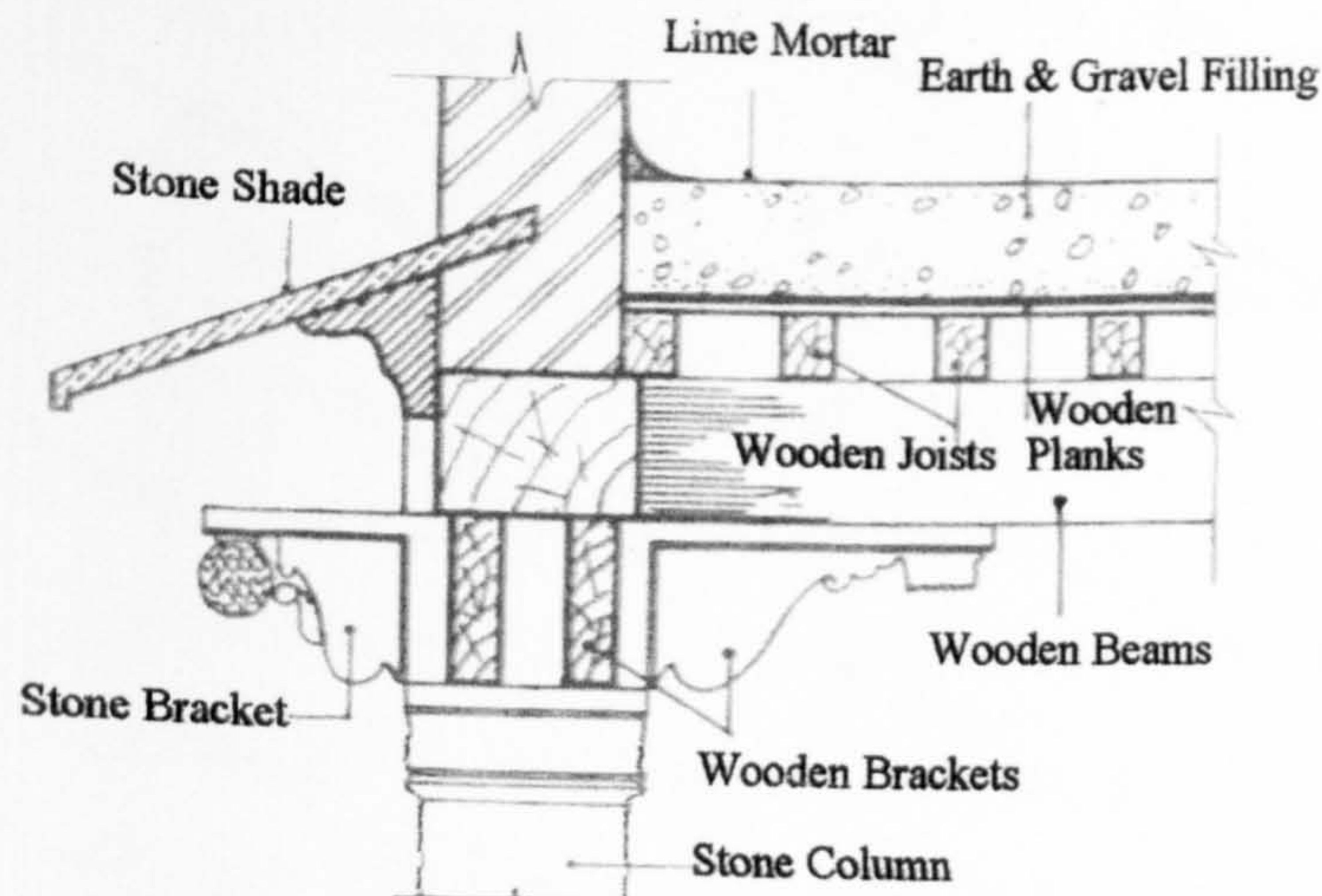
Stone Joints in Parapet, Jaisalmer



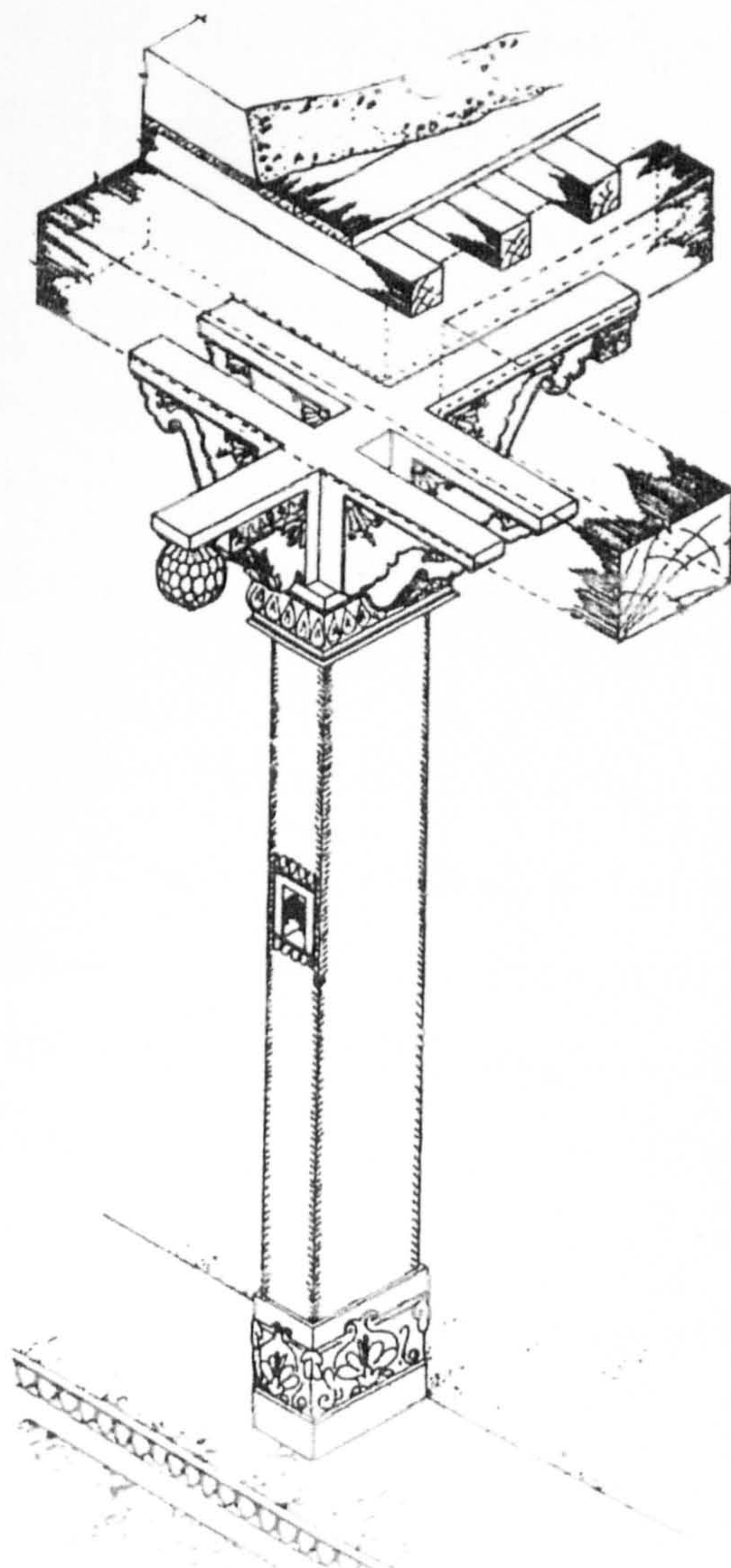
Typical Wall Section, Jaisalmer

**Figure 6.7b - Construction Details - Marwar Region**

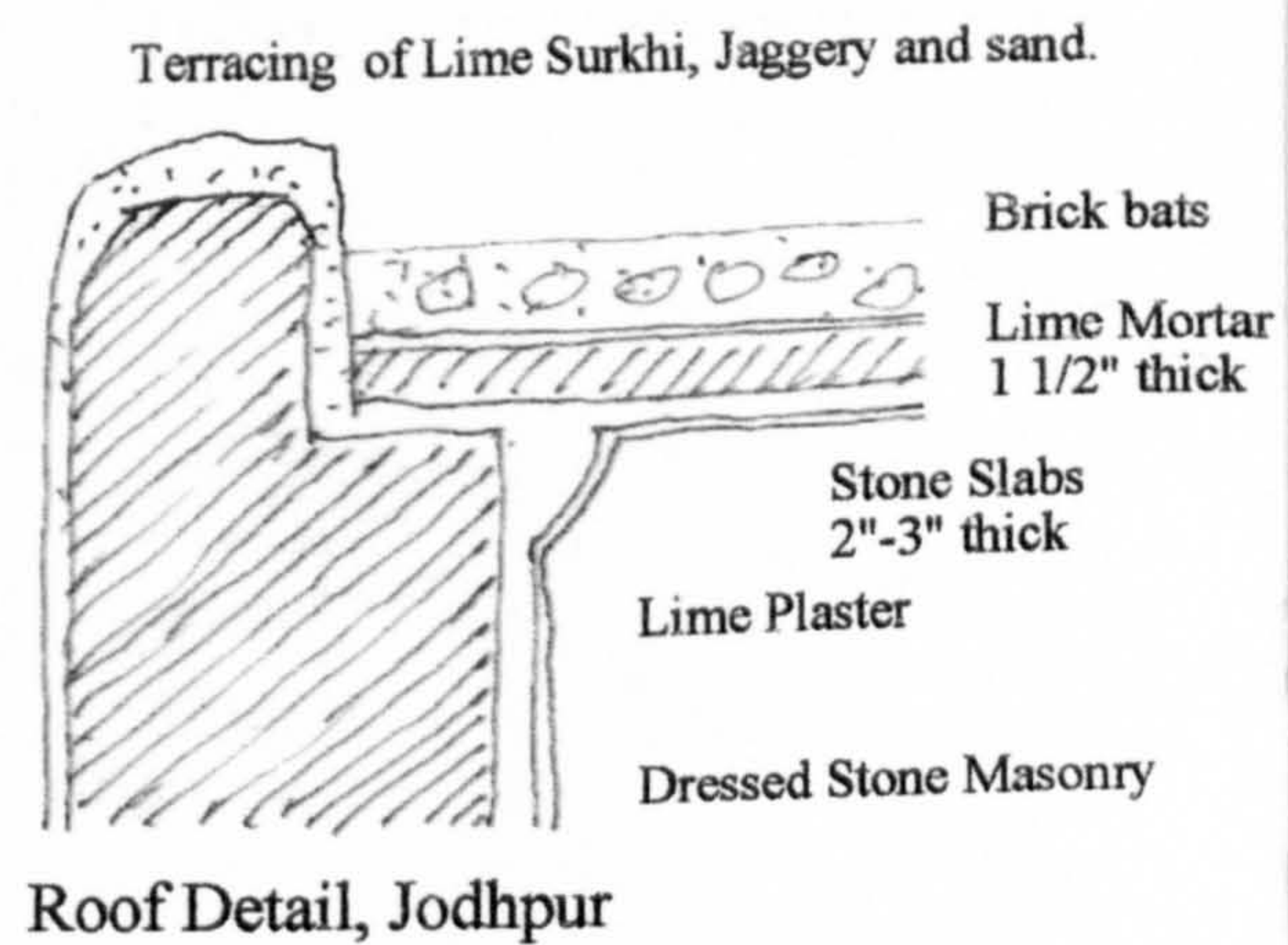




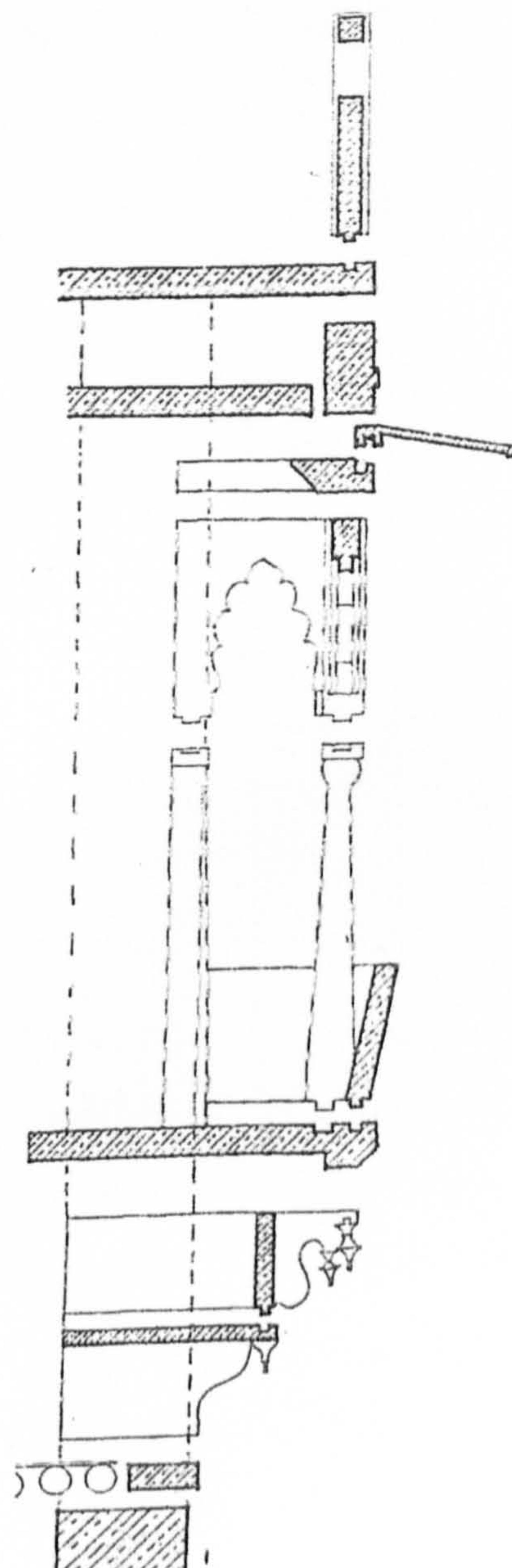
Roof Detail, Bikaner  
(B.Arch. Thesis, C.E.P.T., Ahmedabad)



Detail of Timber Roofing on Timber Brackets and Stone Column, Bikaner  
(B.Arch. Thesis, C.E.P.T., Ahmedabad)



Roof Detail, Jodhpur



Details of stone joints in *Jharokha*, Jaisalmer  
(B.Arch. Thesis, C.E.P.T., Ahmedabad)

**Figure 6.7c - Construction Systems - Marwar Region**



## Merwara Region (Figure 6.8)

This region shows influence from Marwar as well as Dundhar areas. Since Ajmer was the centre of Mughal *suba*, a strong Mughal influence (use of *lakhori* bricks) in the construction is also present. Nagaur had yellow stone quarried in the *Khatu* area. Carved Jain *havelis* like *Bawan Malya Haveli*, Nagaur is on the Marwar pattern. Even the *Patwa Haveli* in Ajmer shows influence from the *Patwa havelis* in Jaisalmer. The buildings in Pushkar show influence from the Jaipur area with *chattris* and *bangaldar* roofs. Structure is of stone and similar to Dundhar region. Intricate *jalis* and stucco work in lime plaster is found in some *havelis*. Use of timber is observed in Nagaur area, whereas Kishangarh and Ajmer *havelis* show roofing of stone slabs. No ornate finishes are observed. A few *havelis* show *arraish* work as an influence from Jaipur area.

## Mewar Region (Figure 6.9 a,b)

This region had availability of stone as well as timber. In one case of Begun *haveli*, masonry in small sized bricks with thick mortar is also observed. White marble was available at Makrana, Kankroli and Udaipur. Stone spans upto 15'-16' are achieved in this region by corbelling with stone beams. Stone walls in random rubble are thicker at the base about 2' – 4' and gradually decrease on the ground floor to 1'6". In some areas like Salumbher, the roof is sloping, with wooden battens and *saagwan* timber on top. On top of this, mud, cowdung and straw mixture was laid. This is called '*Meda*'. Three to five feet above '*Meda*' is a covering of '*kelu*' or clay tiles and timber poles. Entry to the loft or '*Meda*' is from the room. Pure lime and *jhinki* (marble powder) is used in stucco work.





Haveli Ruins, Mauzmad

**Figure 6.8- Construction Systems - Merwara Region**





Random Rubble Masonry, Udaipur



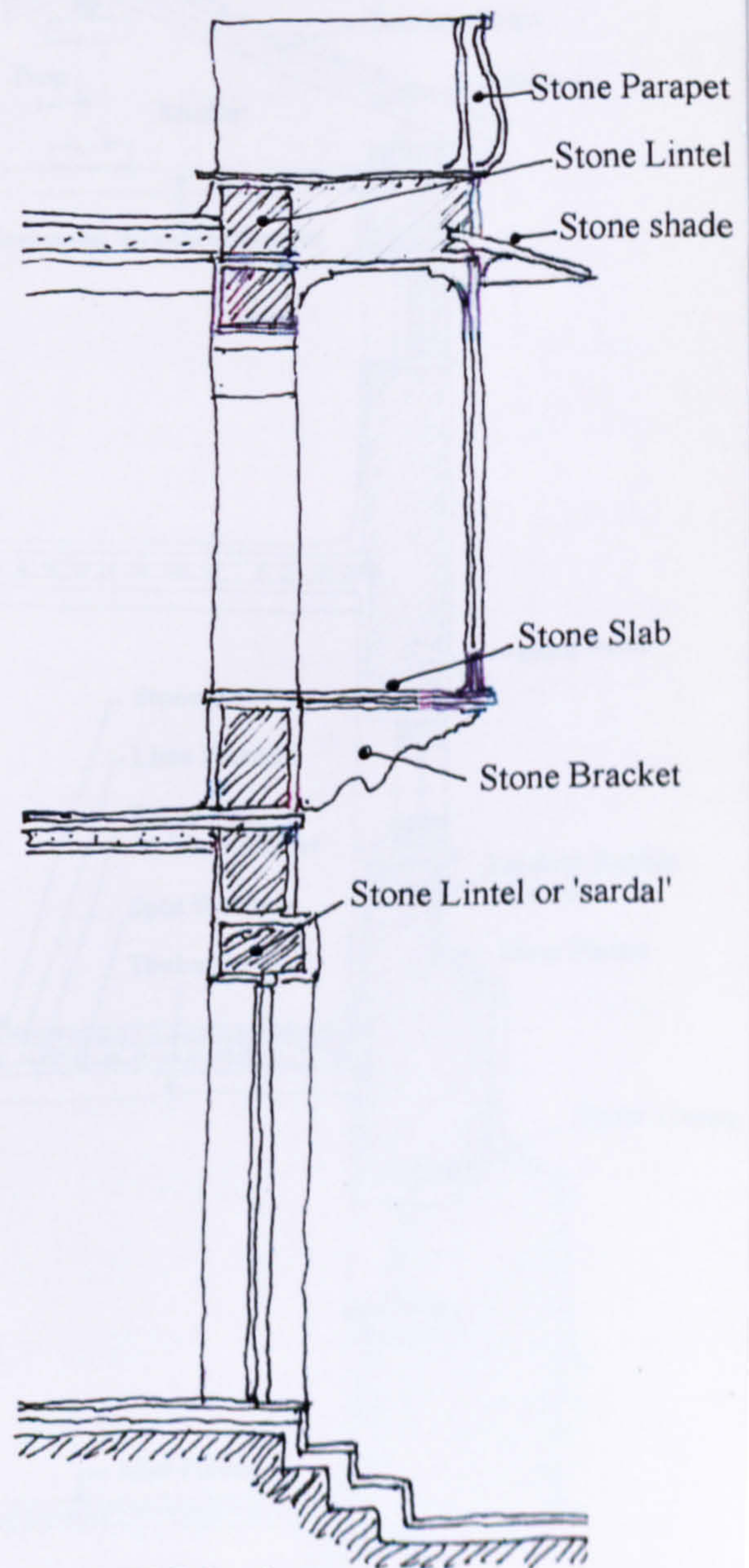
Stairs with Stone Slabs and Brackets



Stone Beams and Slab for Roofing, Udaipur



Clay Tiles (*Kelu*) for Roofing, Udaipur



Typical Wall Section  
(Mohit Keni, C.E.P.T. Ahmedabad)

**Figure 6.8a - Construction Systems - Mewar Region**





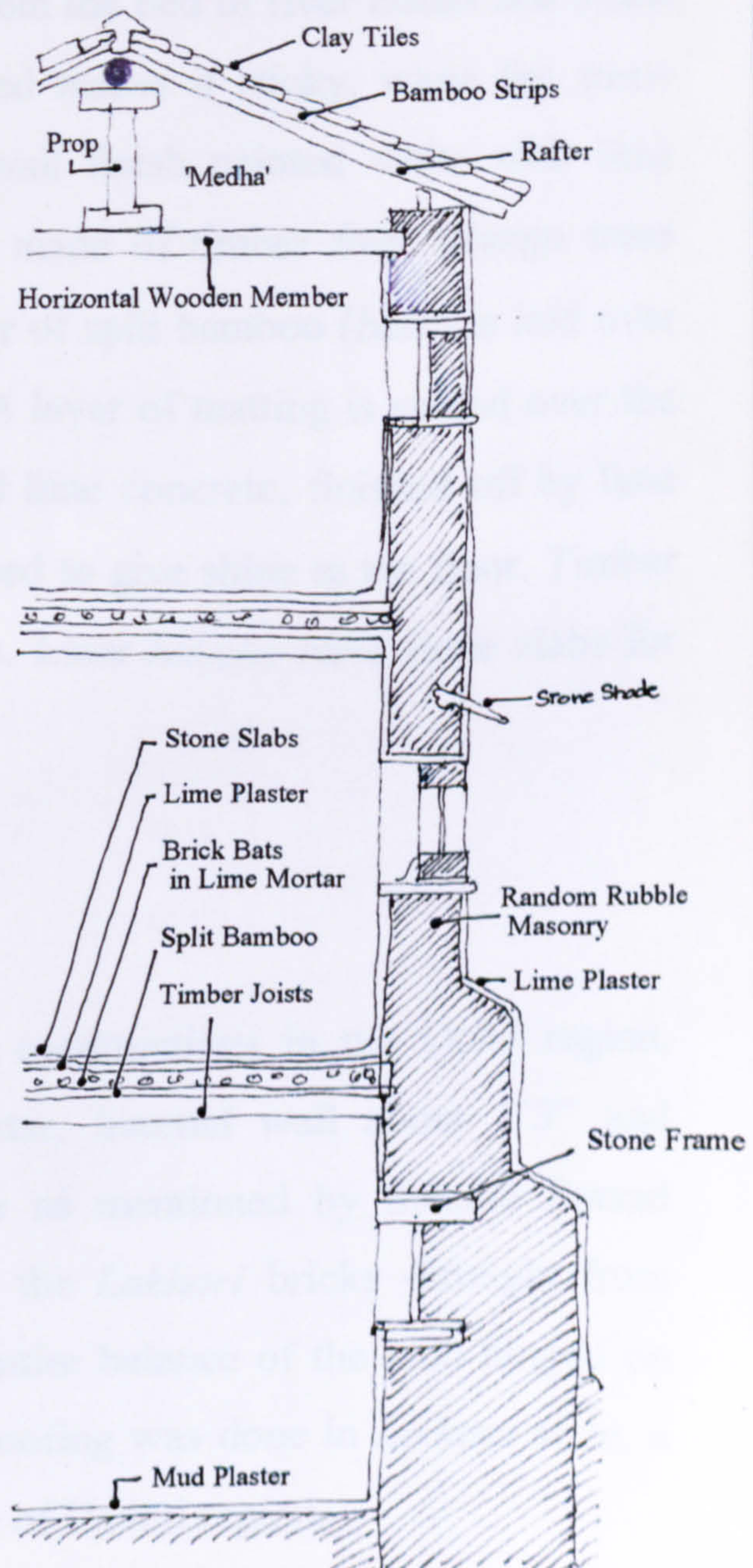
Sloping Wooden Ceiling in Veranda, Salumbher



Wooden Column, Brackets and Ceiling



Stone Column and Brick Masonry, Begun



Typical Wall Section, Nathdwara  
(Mohit Keni, C.E.P.T, Ahmedabad)

**Figure 6.8b - Construction Systems - Mewar Region**



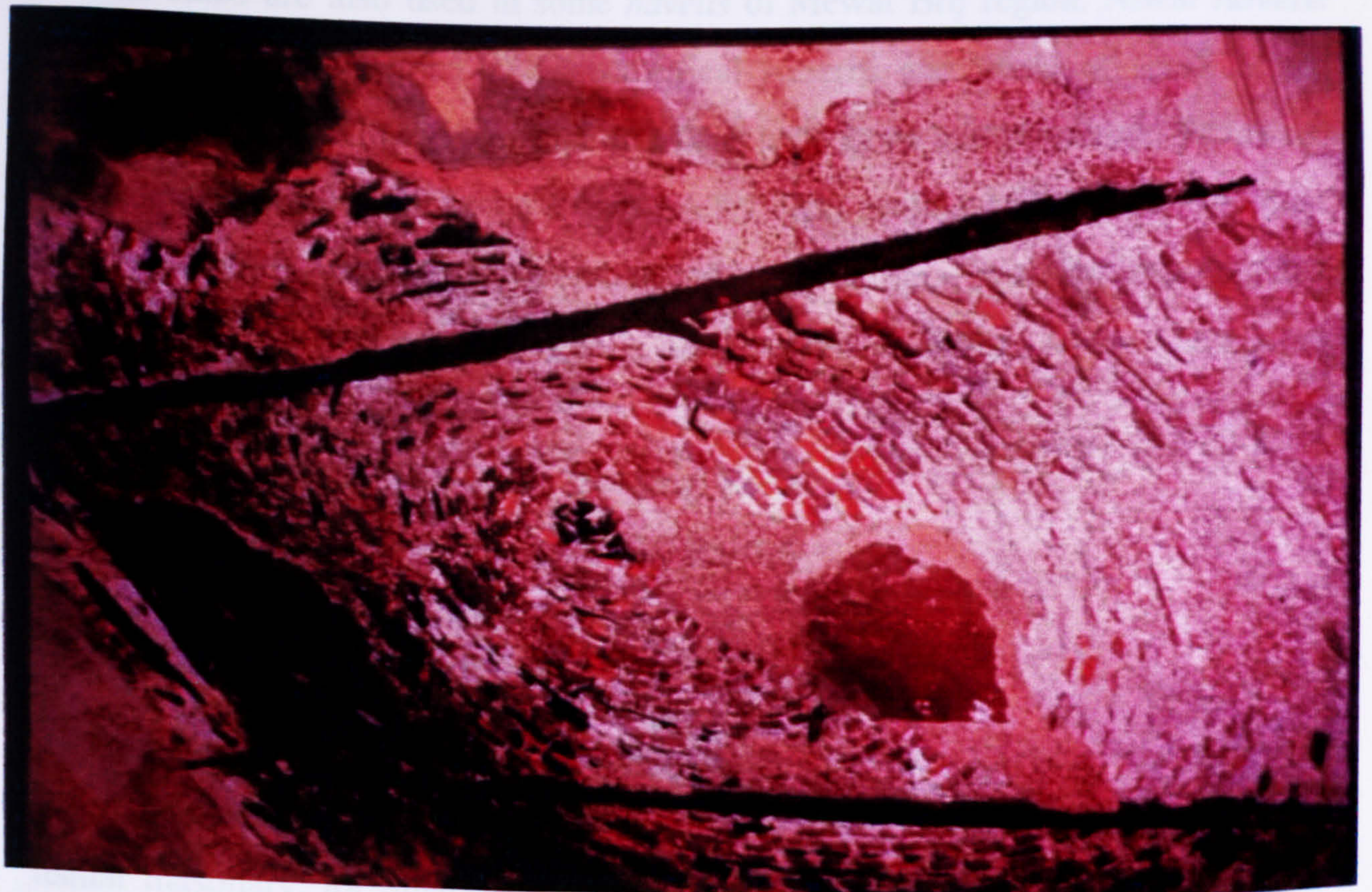
In Salumbher and Udaipur, timber columns are found in some *havelis* but, predominantly stone columns are used. Marble *jali* is also found in some *havelis* in the region. Mewar painting style is often found on *haveli* walls in Udaipur as seen in Dhabhai *haveli*, Udaipur.

Nathdwara has large deposits of sandstone and limestone which are used for walls and floors or the houses have random rubble masonry using sandstone. Powdered limestone mixed with fine sand from the bed of river Banas and straw is used as mortar and plaster. The fine sand makes it sticky, while the straw increases its gripping capacity. Lime for wall finish painted white with lime repeated coating. Roofing in old houses is made of timber from Mango trees (found in the region) used for joists. A layer of split bamboo (*balli*) is laid over timber joists in a perpendicular direction. A layer of matting is spread over the '*ballis*' topped with a layer of brick bat and lime concrete, finished off by lime mortar mixed with fine sand from the river bed to give shine to the floor. Timber is also used for window frames and shutters. Later *havelis* have stone slabs for roofing.

### **Mewat- Brij Region (Figure 6.10)**

The masonry work was similar to Mughal constructions in the Delhi region. Walls of small sized brick with lime mortar, internal wall about 1'3" and external 1'6" – 3' thick. Brick dimensions as mentioned by Sunand Prasad (1987) were 10" x 17"x 3.5". These were the *Lakhori* bricks -brought from Lahore and were criss crossed, so that the entire balance of the arch hinged on the accurate placement of the single brick. Roofing was done in *Ladanu* style, a Mughal tradition explained in the construction of Hadoti region.





Brick roofing (Ladnu) in Alwar *Haveli*



Construction detail of projection in stone on a brick wall, Alwar

**Figure 6.9 - Construction Systems - Mewat Brij Region**



Stone slabs are also used in some *havelis* of Mewat Brij region. Alwar *havelis* have ornamented ceiling with geometrical patterns and floors of small chips. Other areas like Sawai Madhopur and Tonk have stone masonry work. Professor Rehman of Tonk talks about *Khaprel* (clay tiles) roofing called '*tekri*' in some '*baithak*' areas of *havelis*. Prefabricated stone *chajjas*, brackets and columns were available. The cost of these is also mentioned in the Alwar Gazzetteer (1850 A.D.).

A *dasa* or threshold-stone – 2 ½ feet long. Rs. 1

A *chaukhat*, or door and window frame, Rs. 1-4

*Sardal*, or slab over doorway- Rs. 1-4

*Todi*, or bracket, 4 or 5 rupee

*Tirbara*, consisting of three small arches with pillars – Rs. 12- 14

According to the Alwar Gazetteer – a very fine sandstone, suitable for best ashlar masonry, for pillars is obtained in this region. Black and pink marble is also found close to the region. The span of the local stone in Alwar area was limited which accounts for the extra usage of brackets in *chajjas* and projections.

### Shekhawati region (Figure 6.11)

Sandstone quarried around the eastern borders of Rajasthan is used in masonry. These were split into '*patta*' (planks) up to 15' long making ideal lintels, door frames and window frames, joists and cantilevered steps. Non-availability of timber resulted in small rooms with vaulted ceiling of rubble and lime mortar. This was built up on a mud mould supported by brushwood laid over temporary timber, scaffolding set in the walls. The construction activity in Shekhawati region was carried by masons from Jaipur and surroundings.





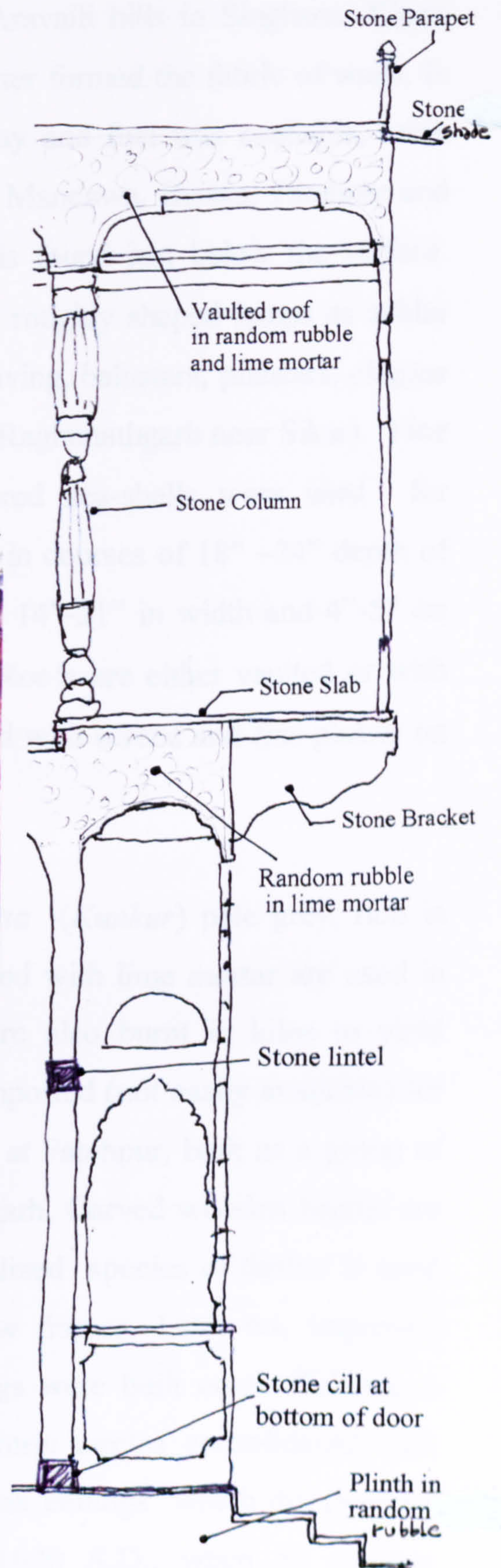
Stone plinth in random rubble with brick walls, Mandawa



Stone wall of *Dhabdhla Bhatta*



Timber beam and vaulted Ceiling



Typical Wall Section

**Figure 6. 11 - Construction Systems - Shekhawati Region**



As Ilay Cooper (1995) describes, along the Aravalli hills in Singhana, Khetri and Jhunjhunu, stone fragments set in lime plaster formed the fabric of walls. In Nawalgarh, Lachmangarh and Sikar, where clay and fuel was available, brick was preferred. In the heartland of the region – Mandawa, Bissau, Fatehpur and Churu, a light grey stone rubble, *dhandhala*, is found just below the surface. This was rich in lime content and was used in roughly shaped lumps as ashlar and burned for coarse lime. Stone elements – paving, balusters, pilasters, *chajjas* and *todas* were mass produced at quarries (like Raghunathgarh near Sikar). Fine limestone was found in Nawalgarh. Powdered sea-shells were used for stuccowork. Walls are made of brick or stone in courses of 18” –24” depth of random rubble. Main wall of *havelis* is usually 14”-21” in width and 4”-5” on cantelivers. Walls are plastered in three coats. Roofs are either vaulted or with stone slabs or wooden beams. Vaults are finished with screed and fine plaster on top.

In most *havelis* of this region, *dhandhala Bhatta* (*Kunkur*) pale grey, rich in lime, irregularly shaped pieces of stone, cemented with lime mortar are used in wall and vaulted ceiling construction. These are also burnt in kilns to yield coarse lime. In some cases, red sandstone was imported (not easily available) for carved *havelis*, as observed in Lal Pathar *haveli* at Fatehpur, built as a group of Shekhwati merchants founded the town of Ramgarh. Carved wooden beams are observed in a number of *haveli baithaks*. A localized species of timber is used for carved beams and door frames and window frames. Later on, improved transport replaced it by ‘*saag*’ and ‘*sal*’. Ceilings were built on scaffolding, a vault or dome of bricks set on edge in concentric circles consolidated with strong lime plaster. Earlier *havelis* had wood plank ceilings which disappeared during the building boom between 1860 and 1920 A.D., when all ceilings



became vaulted. Stucco work in lime plaster and *arraish* finish was as found in Jaipur *havelis*. Worked stone was used for pillars, brackets, balconies and pierced '*jali*' windows. In addition to hooks, bolts and eyes on the door, it is often secured with a crossbar that can be slid into a long pocket in the thick walls derived from gates of forts. *Rohira* wood – durable hardwood was in scarce quantities in Shekhawati region. Doors, windows and frames were made of this. 0.

### **Vagad Region (Figure 6.12)**

The construction materials available in this region are same as in the neighboring Mewar region. Hence similar stone and timber construction is observed in the towns of Dungarpur and Banswara. Kothari *haveli* at Banswara is made in *Khadau* stone.



**Table 5.2 - Traditional Construction terms and their etymological origin**  
(compiled from fieldwork and texts on construction)

TRADITIONAL TERMS USED IN CONSTRUCTION	ORIGIN OF TERM	MEANING	CUURENT USAGE
Arraish		Finish in Lime and Marble powder + ground sea shells.	✓
Arz	Persian	width	
Alagila		Frescoes	✓
Bajri	Persian	sand	✓
Beldar	Persian	Labor	✓
Bhit	Hindi/Sanskrit	Wall	
Bhittichitra	Sanskrit	Tempera paintings	✓
Burj Chatri Gumbad	Persian Hindi Persian/ adop. Hindi	Dome Cenotaph (with dome) Dome	✓
Buniyaad Niv Khaat	Persian Hindi Hindi	Foundation	✓
Chajja	Hindi	Shade	✓
Chakka Chauki	Hindi Rajasthani	Plinth	
Chaparkhat	Hindi	Oblong Chatri	
Chaukhandi	Rajasthani	Four Sided Structure	
Chik Tattiaya/ Khas	Hindi adopted from Persian	Split Bamboo net used as a screen	✓
Choona		Lime Plaster	✓
Churidar mehrab-	Persian	Cusped Arch	
Chitera	Rajasthani	Painter	
Cheja Radda	Rajasthani Arabic	Brick course	✓
Chejara Mistri	Rajasthani	Mason	✓
Darwaaza Baro	Hindi/ Persian Rajasthani	Door	✓
Dehari	Hindi	Daily wages	✓
Doli	Rajasthani	parapet	✓
Farsh	Persian	Floor	✓
Gara	Hindi	Paste of lime and sand	✓
Gaz	Persian adopted in Hindi	A unit of measurement equal to 24 Tussu. (36")	
Ghotai-Chitra	Rajasthani	Fresco painting finished with burnishing and polishing.	
Gokha	Rajasthani/ Hindi	Raised seating at entrance	
Gokhdas	Rajasthani (Mewari)	Projected balcony with seating	
Gumthas	Rajasthani	Domes	
Hathini	Hindi/ Rajasthani	Broad stone slab in steps at intervals for resting	
Izzara	Persian	Dado	
Jali	Sanskrit -Jaal	Net or Screen in stone , wood or other materials	✓
Jhajada		Stone in Shekhawati grounds	✓



TRADITIONAL TERMS RELATED TO CONSTRUCTION WORK	ORIGIN TERM	OF	MEANING	CURRENT USAGE
Jhinki	Rajasthani		Marble dust used for plaster.	
Jharokha	Sanskrit – Jaal-		Screened window (often projected for peeping out.	
Kalli			Baked lime	
Kanwal	Hindi		Oriel windows	
Kara			Paste of lime and marble powder as base for arrais work	
Khamira			Type of lime paste	
Kheep	Rajasthan		Cowdung used in erection of formwork in construction.	
Kamthan Raj, Silat, Silawat Sangtarash, Me'mar	Rajasthani Rajasthani Persian		Traditional Stone artisan Stone carver Stone carver	
Khidki Bari	Hindi Rajasthani		Window Small opening in wall	✓
Khurra	Persian		Ramp	
Lakhori-eent	Persian		Small size bricks initiaaly manufactured in Lahore region.	
Pardi	Rajasthani		partition wall of stone slab	
Patda Sirdal, Mathot	Hindi Rajasthani		Lintel	
Pida	Jodhpur		Wooden rafters	
Pidakhiyas			steps	✓
Rori			Brick ballast	✓
Sut	Hindi		(3mm) is a term that is still used for measurement.	
Sutradhar			Expert Mason	
Surkhi			Brick dust	
Theka			contract	✓
Tul	Persian		Length	

**Table 5.3 – Dimensions of Havelis Spaces and Elements (From Fieldwork)**

Regions	Inner court	Inner court Bay	Room span	Column	Doors (width)
Dundhar	13'- 40'	2' – 8'	9'-10', 12'-13'in Amber	1'x 1'or 1'x 2'	2'6''3'0-5'0 / 5'-8'
Godwad	9'-12'	Single Bay	6'-7'	1x1'	3'-5'
Hadoti	12'- 40'	3' – 8'	9'-10'	1' x 1' 1'3'' x 1'3''	5'8' / 11'
Marwar	14' – 38'	3'- 8'	9'-11'	1' x 1'	4'/7'/8'/11'
Merwara	20'-38'	4'/6'/8'/12'	11'-12'/14'	1'x1'	5'/8'
Mewar	13'- 60'	3'-7'	9'-11'/12'	1'x 1' 1 x 1'6'' 1' x 2'	4'/5'9'/10'/11'/12'
Mewat-Brij	12'-70'	3'- 8'	8-10' sometimes 14'	1'x1' 1' x 2'3''	7'/10'/11'
Shekhawati					
Vagad	20'x 40'	3'-9'	10'	1' dia.	4'-7'

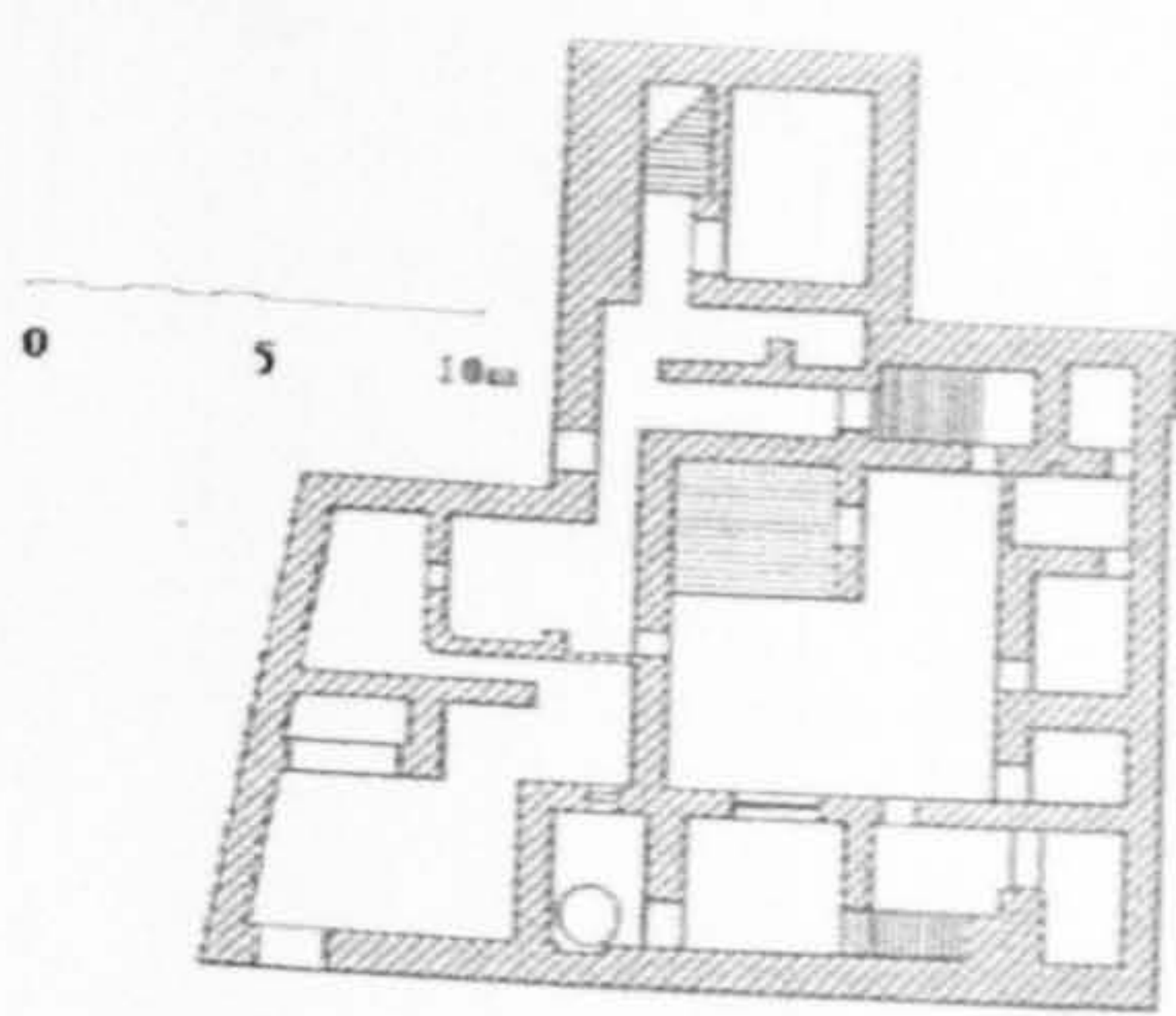


## 7 *Havelis* beyond the Boundaries

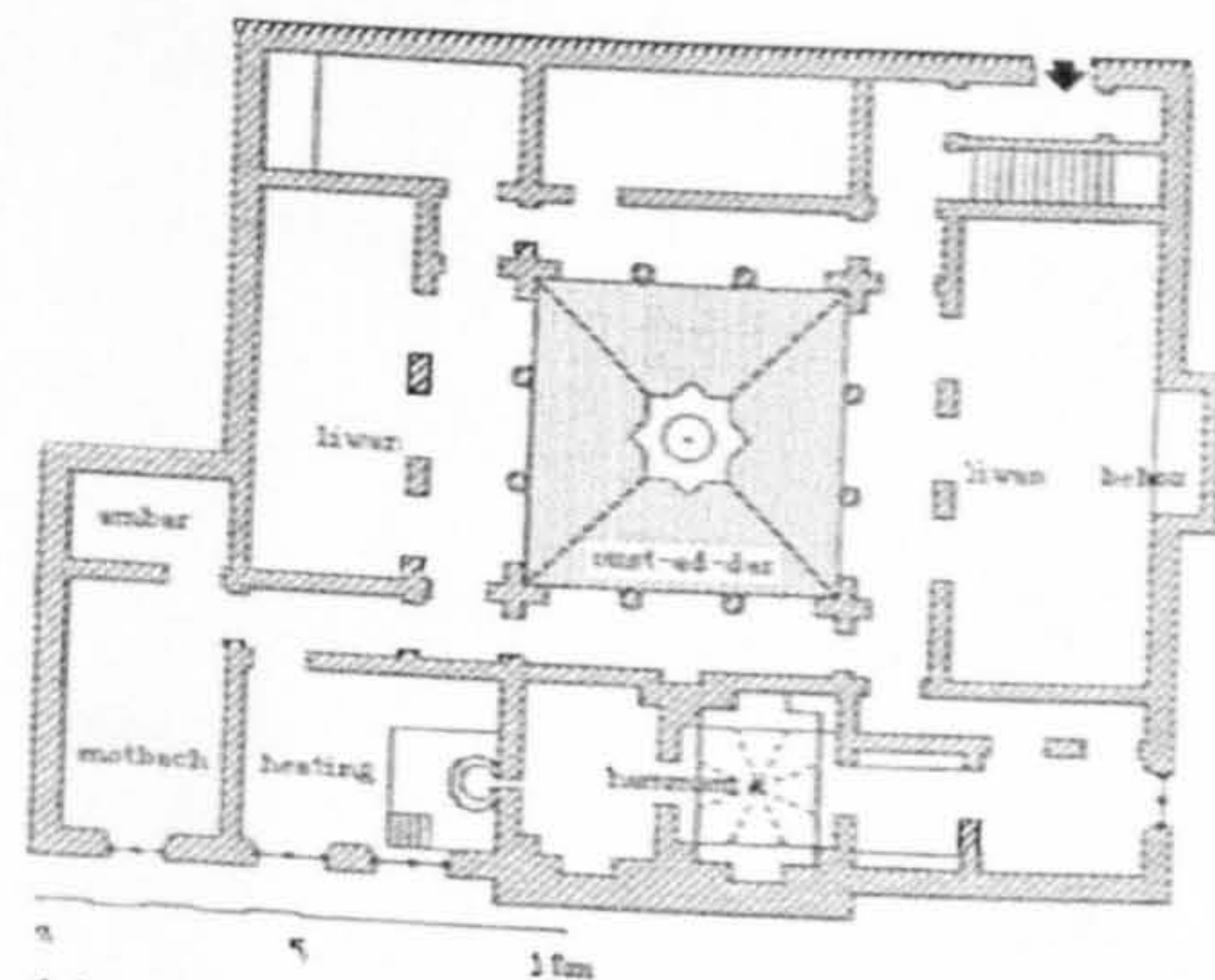
Cross cultural comparisons of the *haveli* type of courtyard houses are many and varied. According to Craig Hinrichs ('The courtyard as a Dwelling', *IASTE. Vol.6*, 1989), this dwelling form was used in four ancient urban civilizations – The Tigris Euphrates valleys in Mesopotamia, the Indus Valley in India, the Nile Valley in Egypt, Hwang-Ho and Yangze Valleys in China) as well as by classical Greeks and Romans). Thus the adaptability of the form is proved cross culturally for several centuries. Even the privacy factor of indirect entrance is found in several cultures (Figure 7.1).

T.S. Randhawa's (1999) work on the Indian courtyard house compares this form in different regions of India. He describes the *havelis* of northern India, *rajbaris* of West- Bengal, the Maharashtrian *wada*, *nelekutta* in Kerala and *chettiar* in Tamil Nadu. The courtyard was the most essential space in all these house types. These examples prove that the courtyard type house was an ideal generic form for traditional dwellings. However, it is the nature of use, rituals, materials and formal composition that determines the transformation of this generic courtyard plan to specific regional identities. The variations of this archetype that relate the significance of determinants such as caste, place or topography and available materials and technology, have been described in the previous chapters. This chapter sums up the sub regional variations of the *haveli* form that are identified in the previous chapters and compares these characteristics with *havelis* in towns of adjoining border areas. It marks out theses sub regional variations in terms of spatial planning, formal principles and local materials.

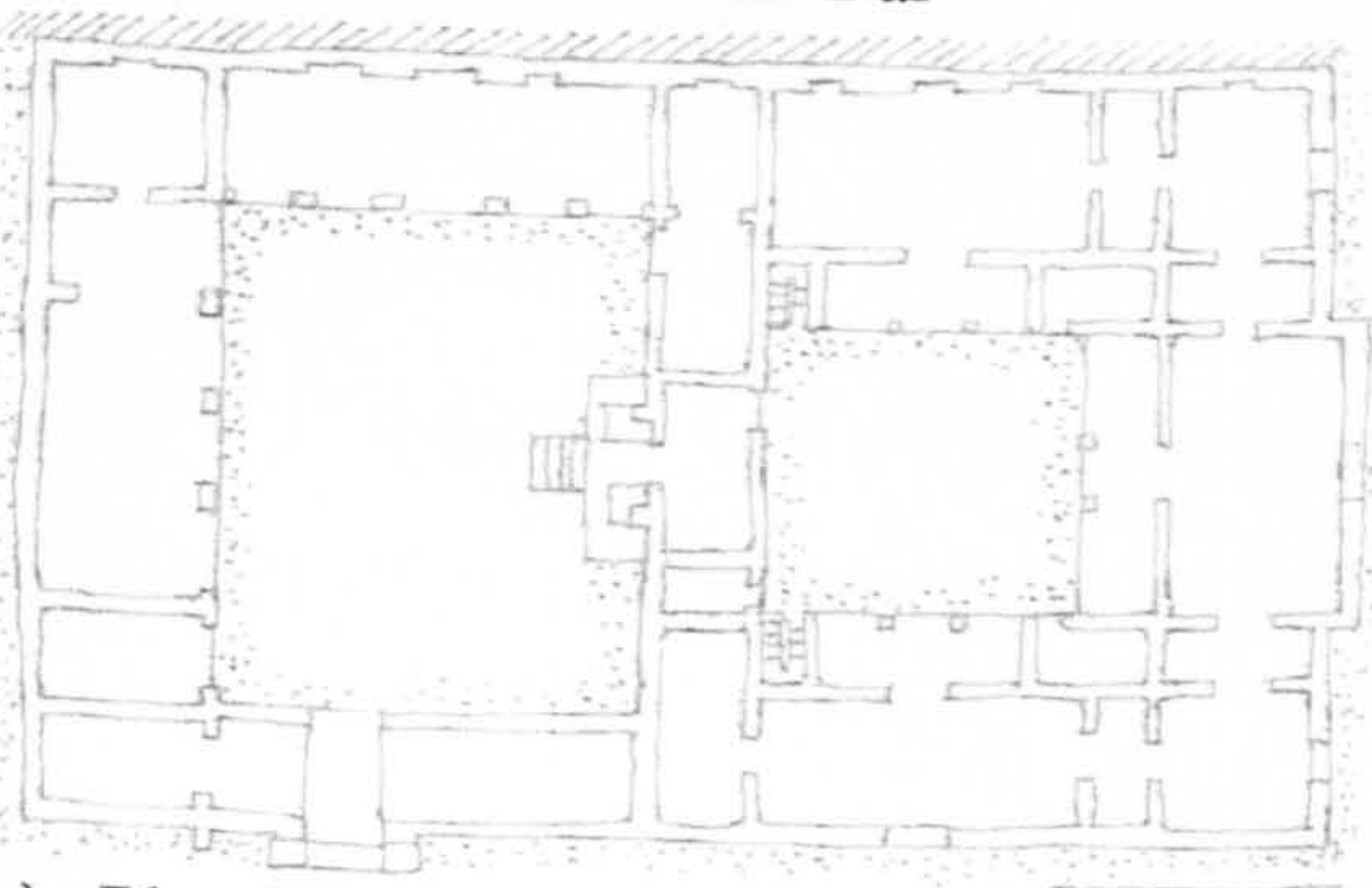




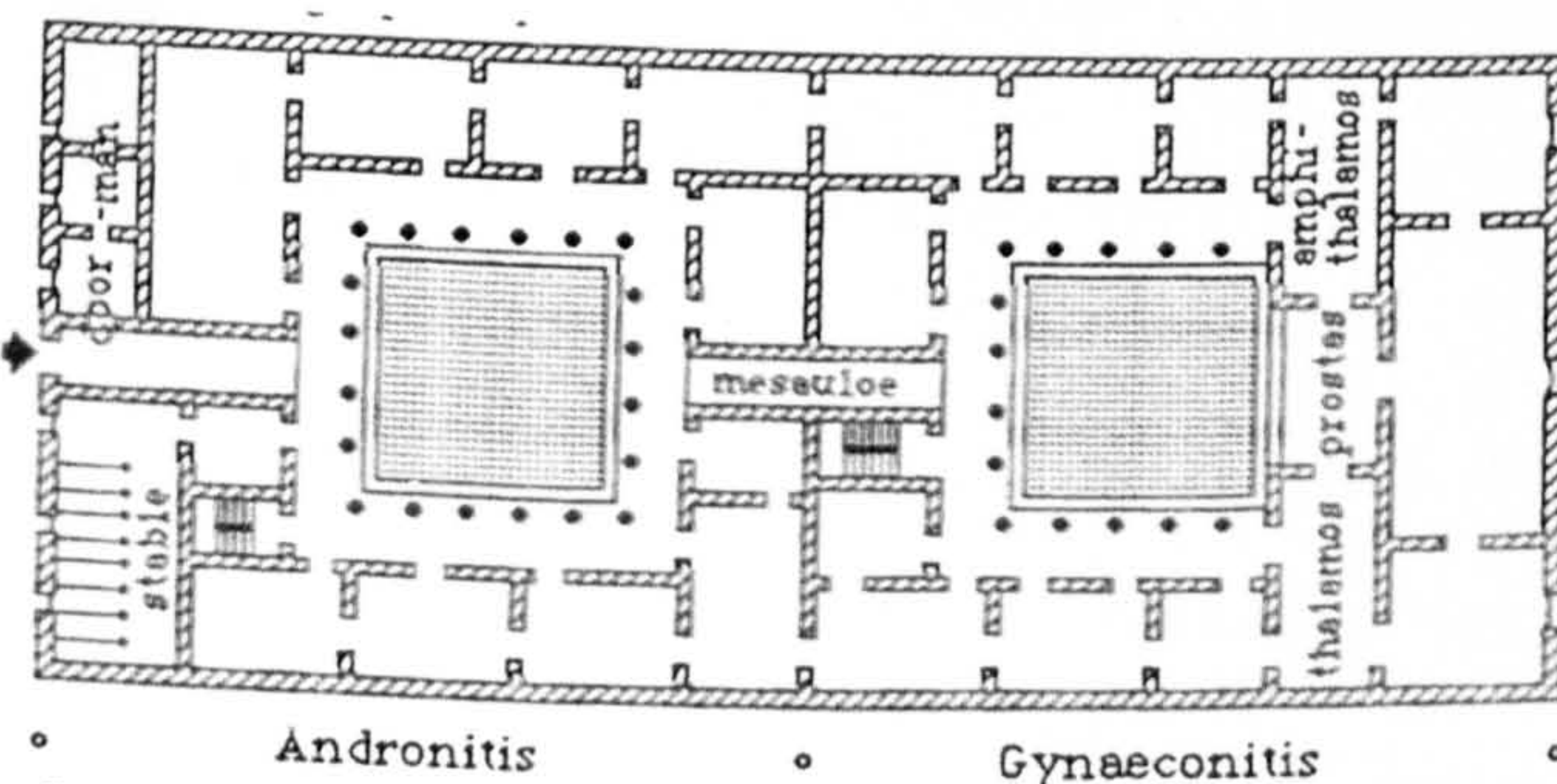
a) - Mohenjodaro (4th to 3rd Millennium B.C.)



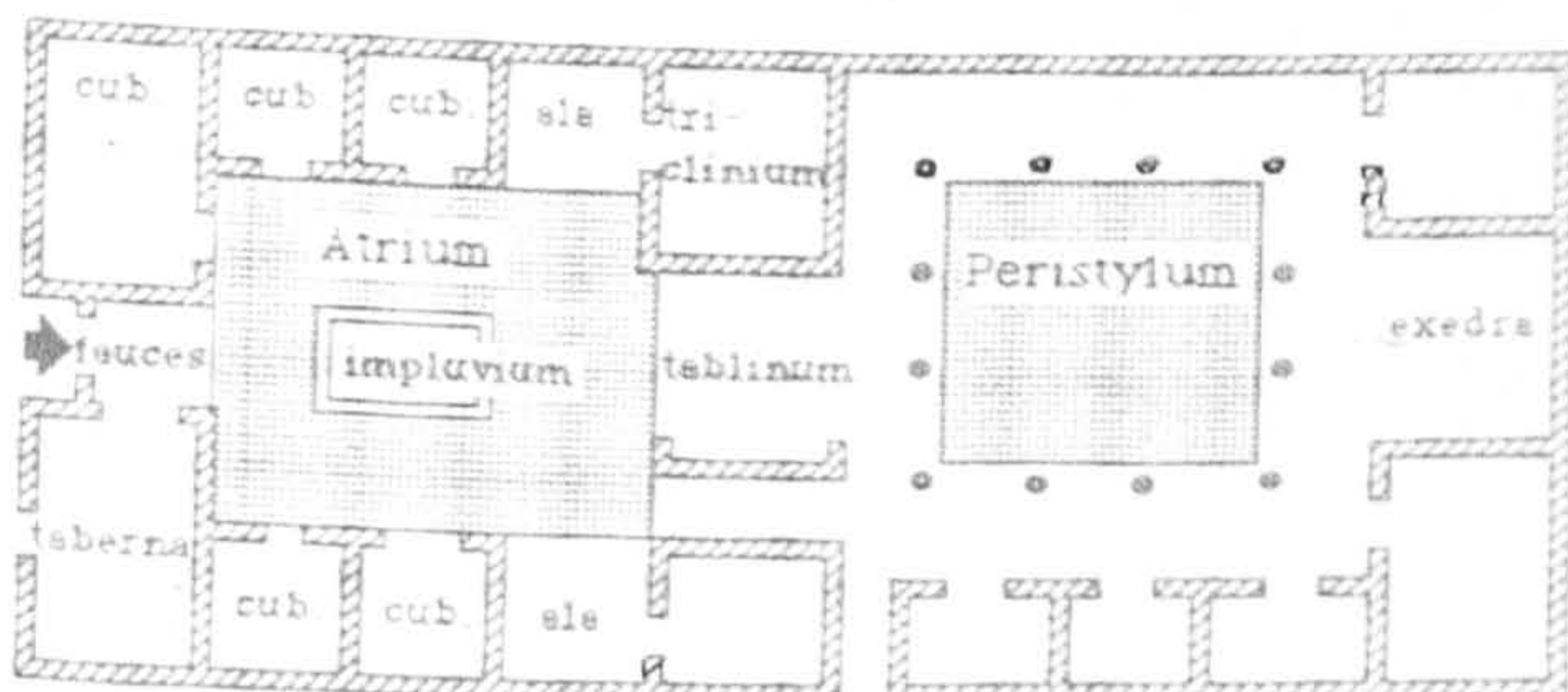
b) - A Medieval Moorish Dar



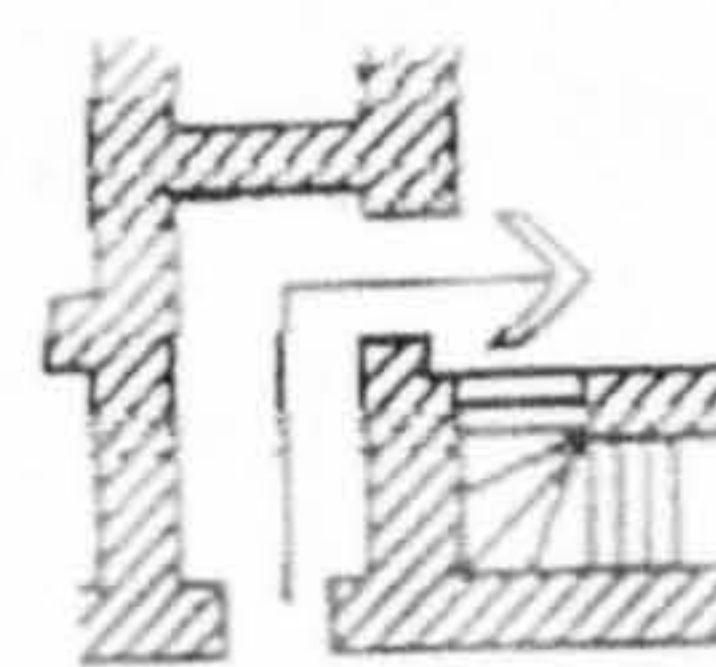
c) - Bhatt Haveli, Amber



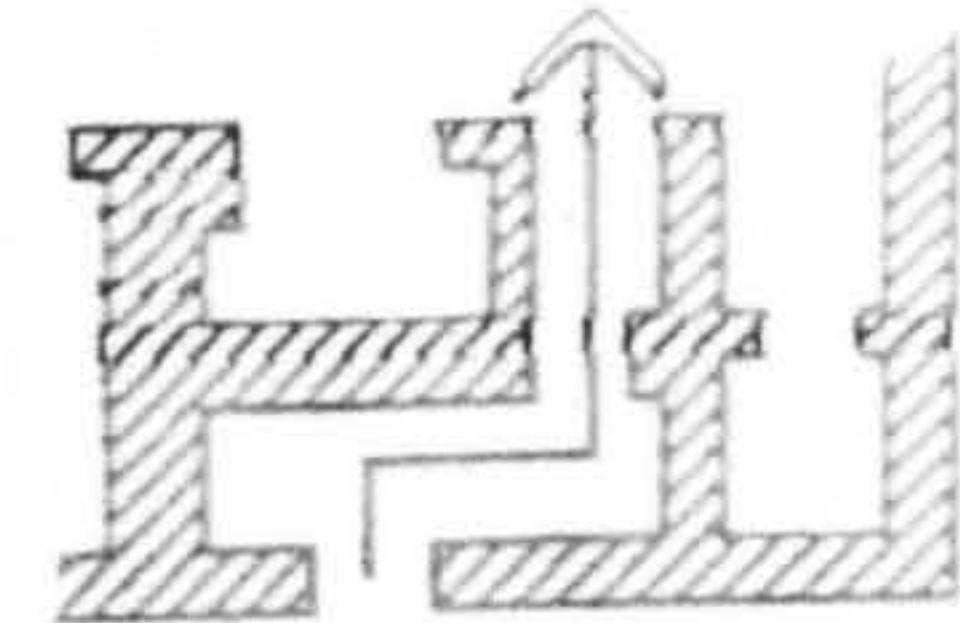
d) - Greek House according to Vitruvius -Plan



e) - Roman House Plan



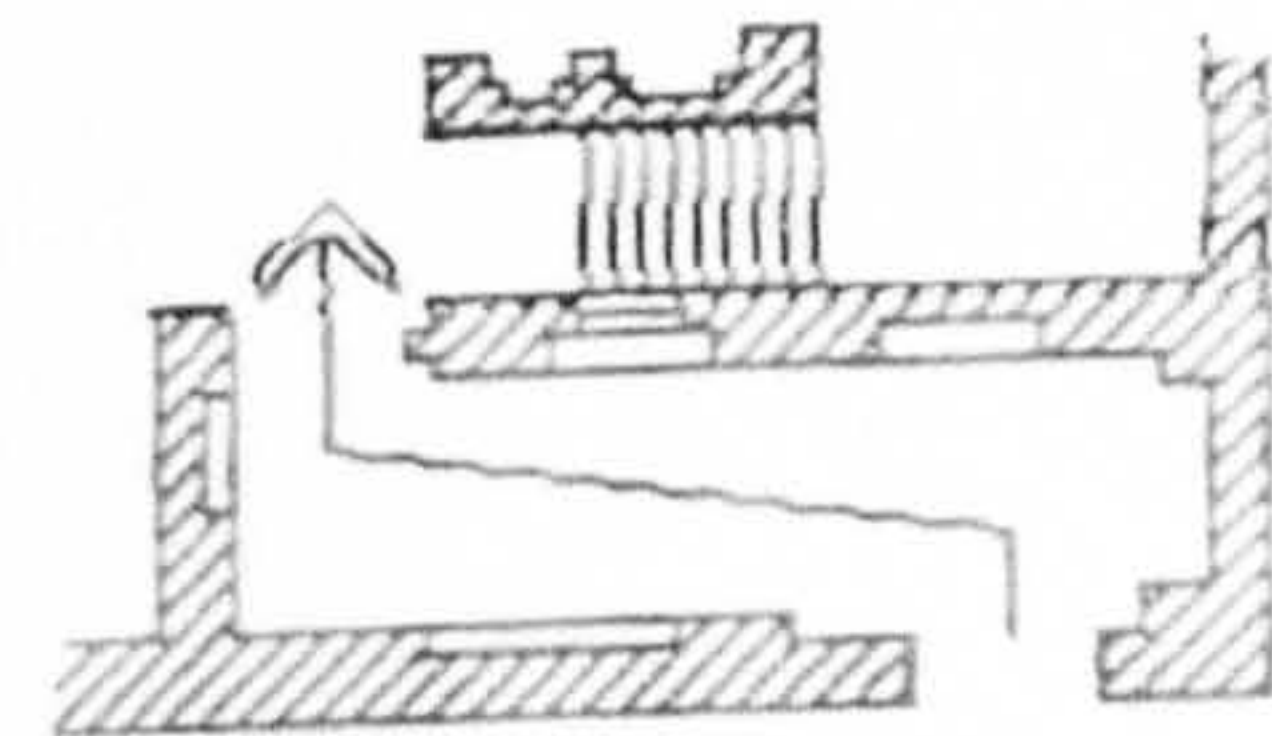
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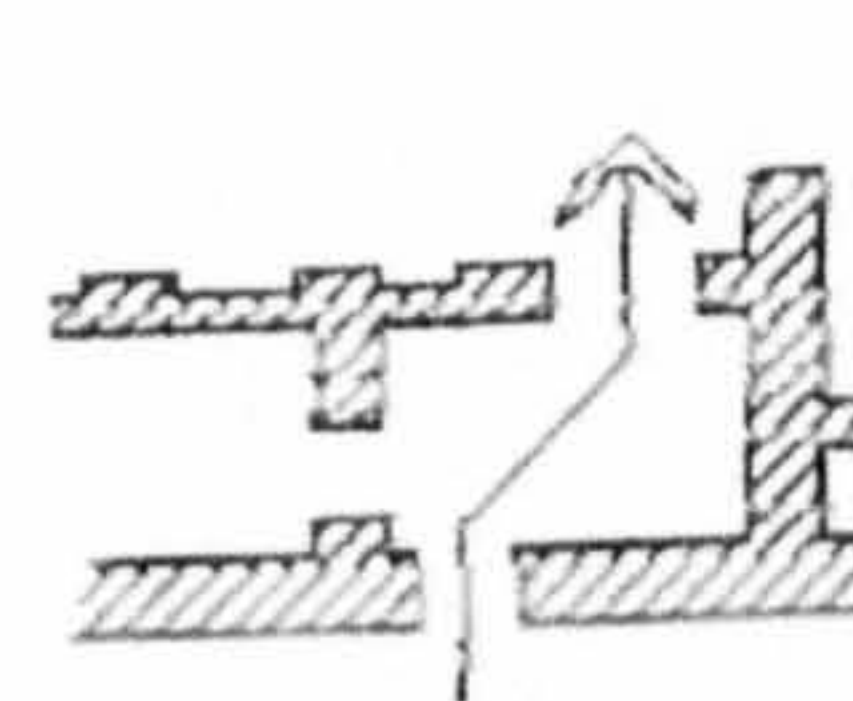
Assur



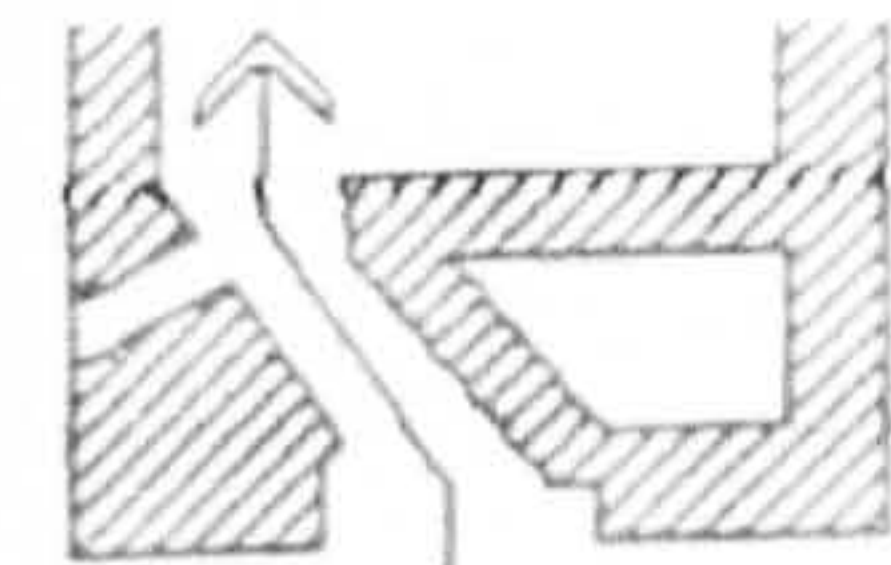
Babylon



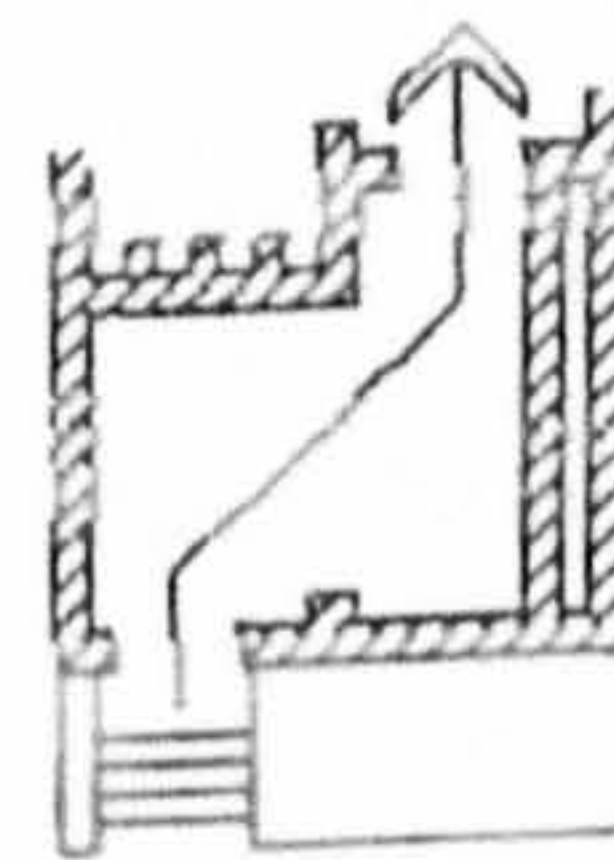
Baghdad



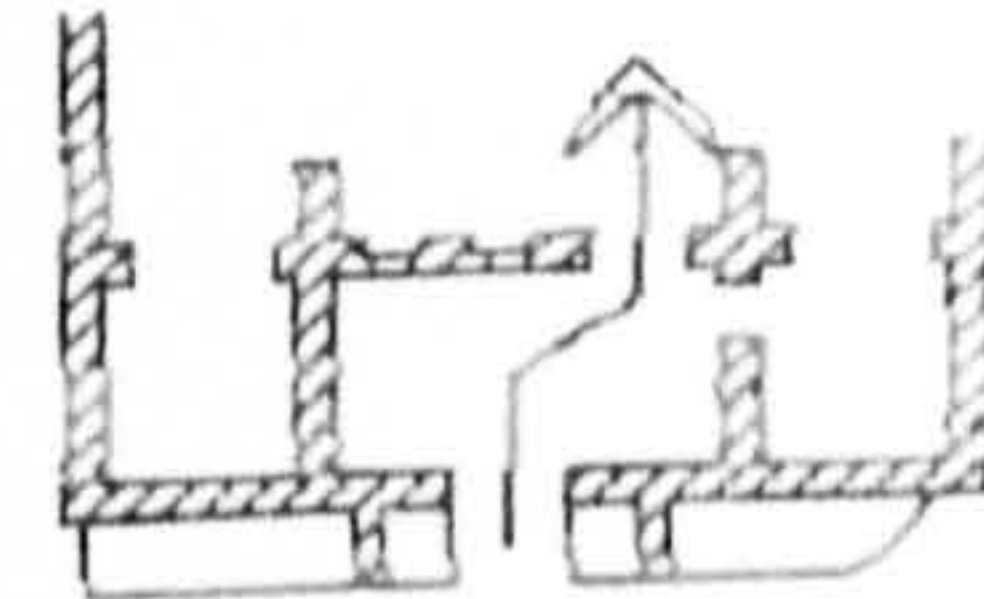
Mohenjo - Daro



Harappa



Jaisalmer



Jaipur

f) - Indirect entrances in cross cultural context

Source of Figures (excluding Fig.c):  
Craig Hinrichs, 1989

**Figure 7.1 - Cross Cultural Examples of Courtyard Form**



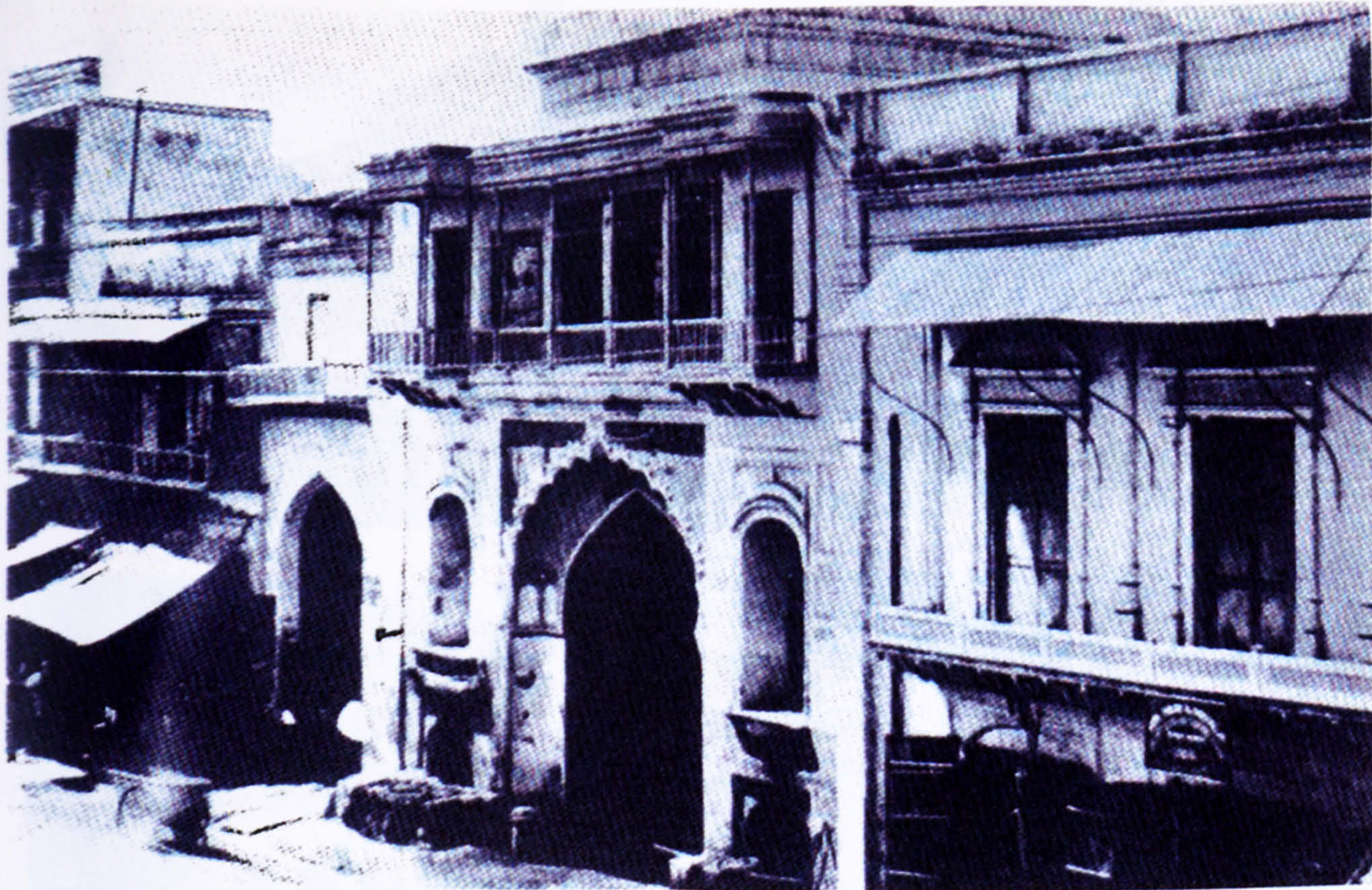
Since the political boundaries of Rajasthan were fluctuating in the medieval times and the locals associated more with sub regional identities, the *havelis* in different areas of Rajasthan have many similarities with the *havelis* in boundary areas of adjoining states. A number of medieval towns that are within the political boundaries of present Rajasthan were earlier under adjoining Mughal *subahs* and British states (See Figure 1.3 and 1.4 in Chapter 1). Gujarat *subah*, Malwa *subah*, Agra *subah*, Delhi, Multan and Thatta surrounded the boundaries of the Mughal *subah* Ajmer. During the British period the boundaries of Rajasthan were linked with Punjab state, United Provinces (Delhi), Gwalior, Tonk, Central Indian Agency and Gwalior and Bombay state. Hence, a striking resemblance is observed in the culture and architecture of the boundary regions of Rajasthan with the corresponding adjoining states. This chapter compares the Rajasthan *havelis* with those in the adjoining states of Gujarat, Haryana, Delhi, Uttar Pradesh, Madhya Pradesh and Punjab. It also includes examples of *havelis* in Lahore, Pakistan as it was part of Punjab in the medieval times.

## **7.1 Dundhar Region and Neighbouring Delhi and Haryana**

(Figure 7.2, 7.3, 7.4)

The *haveli* plots in Dundhar region conform to a rectangular or square shape, sometimes with offsets. Despite topographical variations in hill towns like Dausa and Amber that follow the organic, non axial urban pattern, the *havelis* have regular right angled plots. The *havelis* are designed on the Rajput palatial pattern with big courtyards. In this aspect they show resemblance with the *havelis* of the Mughal *Nawabs* in old Delhi.





Zeenat Mahal Haveli, Old Delhi.  
(Pavan Verma 1992)



Bhatt Haveli, Amber, Dundhar region



Ahmed Yaar Ki Haveli, Tonk, Mewat-Brij region

**Figure 7.2 - Havelis of Dundhar and Mewat Brij Region  
of Rajasthan and Shahjahanabad, Old Delhi**





Natani Haveli, Jaipur, Dundhar region



Haveli, Alwar. Mewat -Brij Region. Rajasthan



Haveli, Brindaban. Uttar Pradesh  
( T.S. Rnadhawa, 1999)



Haveli, Khoh, Harayana (1770 A.D.)

(A+D, May-June 1995)

**Figure 7.3 - Havelis of Dundhar and Mewat Brij Region of Rajasthan and adjoining states of Uttar Pradesh and Haryana**

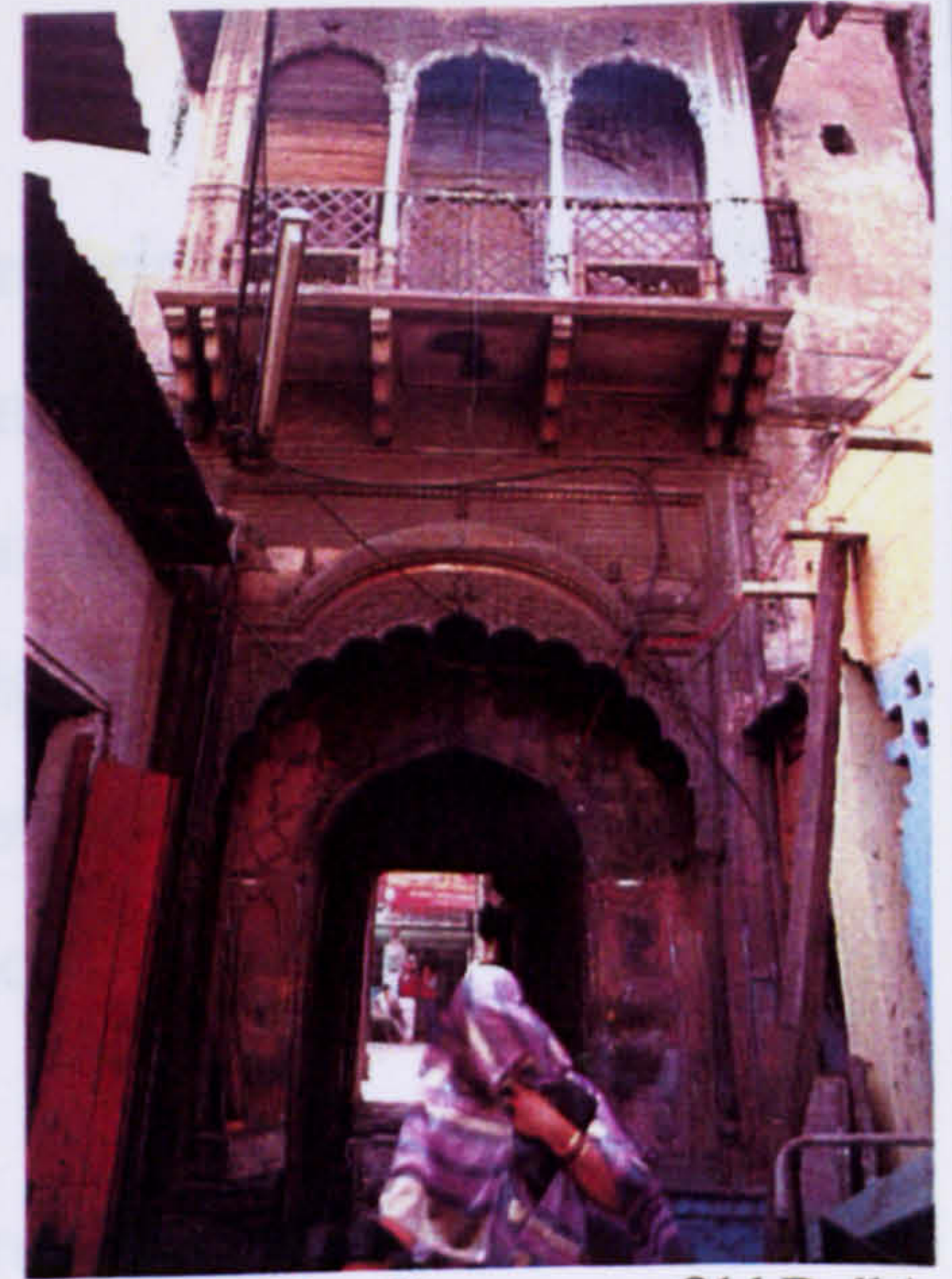




Haveli, Alwar,  
Mewat-Brij region



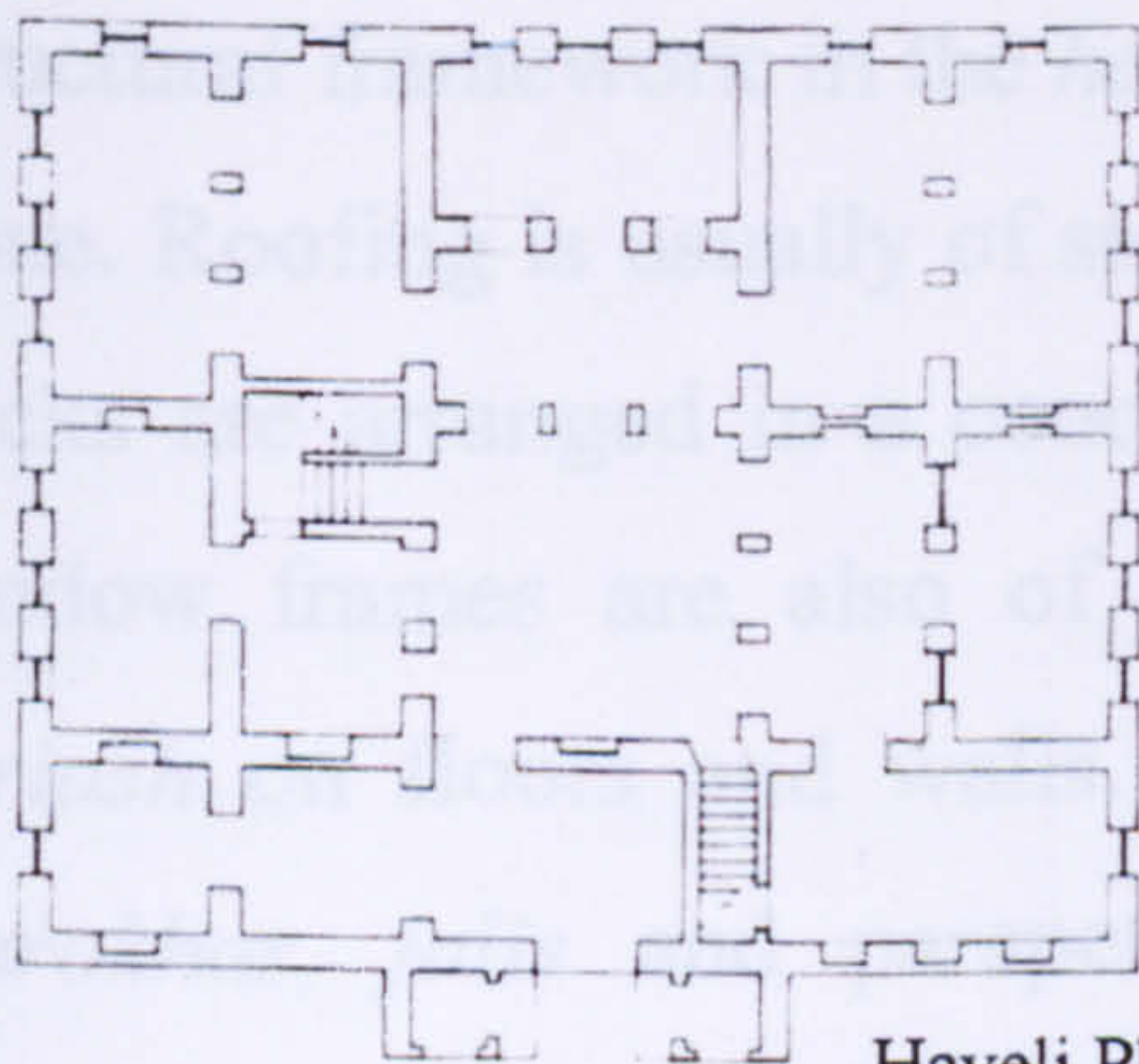
Haveli entrance, Lucknow,  
Uttar Pradesh  
(T.S. Randhawa, 1999)



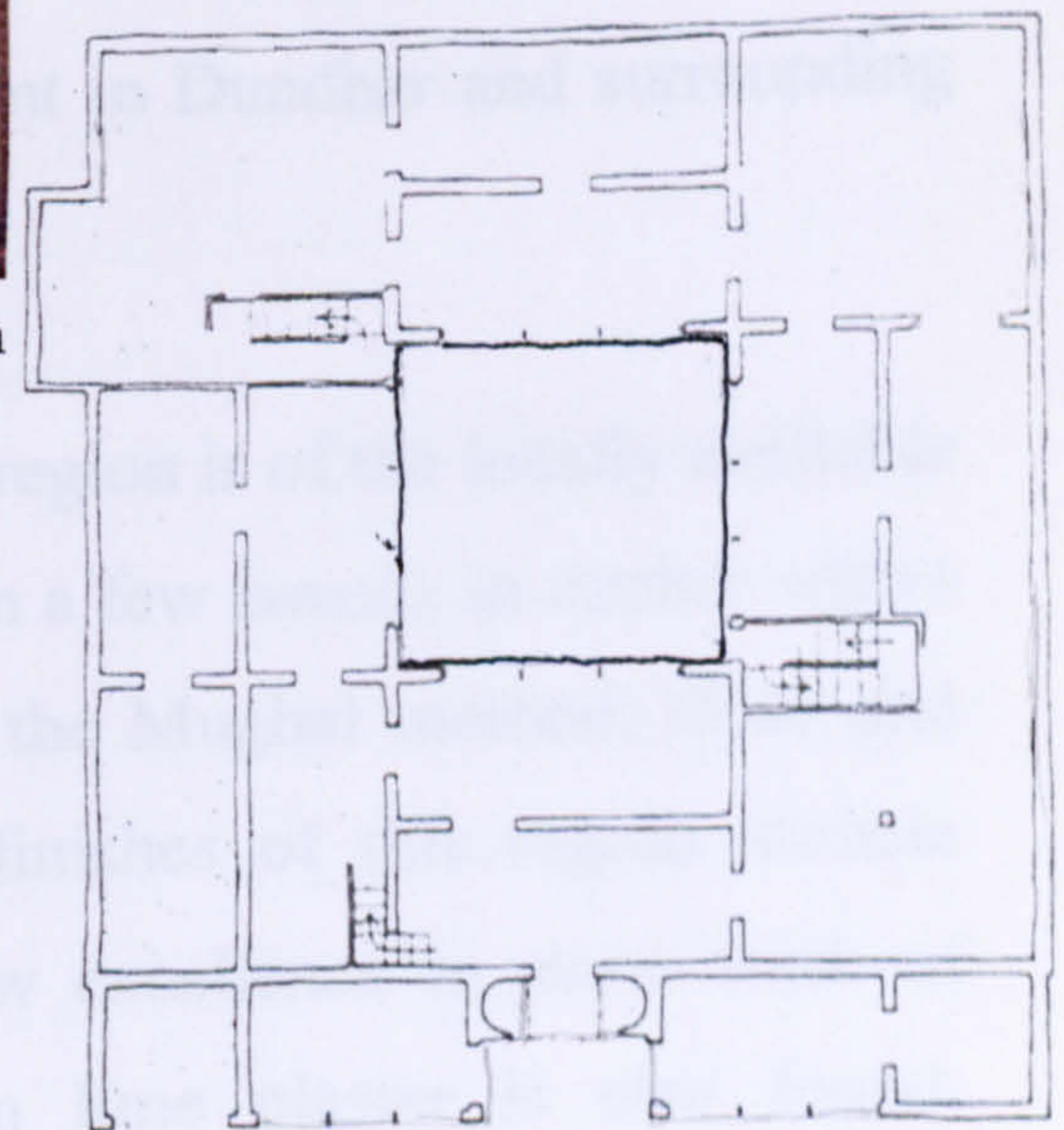
Haveli entrance, Old Delhi  
(Pavan Verma, 1992)



Extra usage of brackets. Haveli, Brindaban. Uttar Pradesh  
(T.S. Randhawa, 1999)



Haveli Plan, Khoh, Haryana  
(A+D, May-June 1989)



Haveli Plan, Fagi, Dundhar region  
(Sarah Tillotson, 1998)

**Figure 7.4 - Havelis of Dundhar Region in Rajasthan and  
Havelis of Old Delhi and Uttar Pradesh**



Delhi *havelis* were originally owned by the Muslim aristocrats serving the Mughal rulers, hence followed the palatial spatial planning with bigger courts. Later on they were taken by the Marwaris. Spatial parallels are evident in the *havelis* of Dundhar region with those in Delhi and Haryana such as *gokhas* at entrance, *dalan*, *dar-dalan*, *naqqarkhana*, *diwan-i-aam*, *diwan-i-khas* etc. This spatial development was linked to the spatial exuberance of the Mughal palaces.

Similarities with border areas of Delhi and Haryana are also observed in façade vocabulary of *gokhas* outside the entrance, use of cusped and pointed arches, lotus columns. Façades of Dundhar region are embedded with simple and composite surface aedicules and simple and composite projected aedicules with aedicular density increasing in the later post Jaipur Marwari patterned *havelis*. Corresponding *haveli* façades in Delhi and Haryana region show similar aedicules but with lesser aedicular density following the Rajput pattern of minimal ornamentation. The aedicular openings are often arched (cusped, trefoil, pointed and colonial) with rectangular or *chatri* type framing. The doubly projected aedicules are completely absent in Dundhar and surrounding Delhi and Haryana.

Structural framework in the *havelis* of Dundhar region is of the locally available stone. Roofing is usually of stone slabs except in a few *havelis* in Amber where bricks are arranged in a concentric manner in the Mughal method. Door and window frames are also of stone. Typical finishes of this region include *aariash* on floors and walls. The *havelis* show excellence in stone work of *jharokhas*, *jalis* and parapets. Stuccowork in lime plaster is also found. Decorative finishes include mirror work, stained glass, frescoes, *panni*, *meena* and *dakmeena* work. Stylistically, the bangaldar roof became prevalent in stone



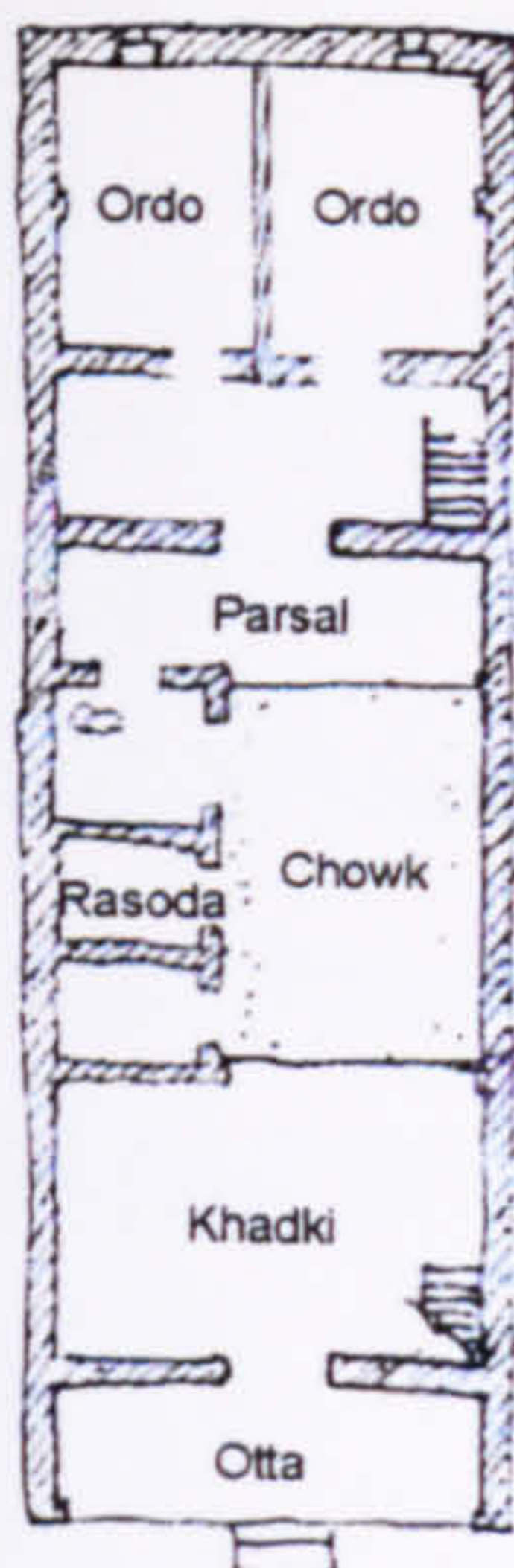
*chatris* and *chajjas* and was later used in other areas of Rajasthan too. In terms of construction materials, these *havelis* differ from the *havelis* of Haryana and Delhi as small sized *Lakhori* bricks promoted by the Mughals were more prevalent in these adjoining areas. In this aspect, it is the adjoining Mewat Brij region of Rajasthan that shows more similarities with Delhi *havelis*. Figure 7.2 - 7.4 compare the *havelis* of Dundhar and Mewat Brij region in Rajasthan with *havelis* in neighboring states of Delhi, Haryana and Uttar Pradesh.

## **7.2 Godwad Region and Neighbouring Gujarat (Figure 7.5)**

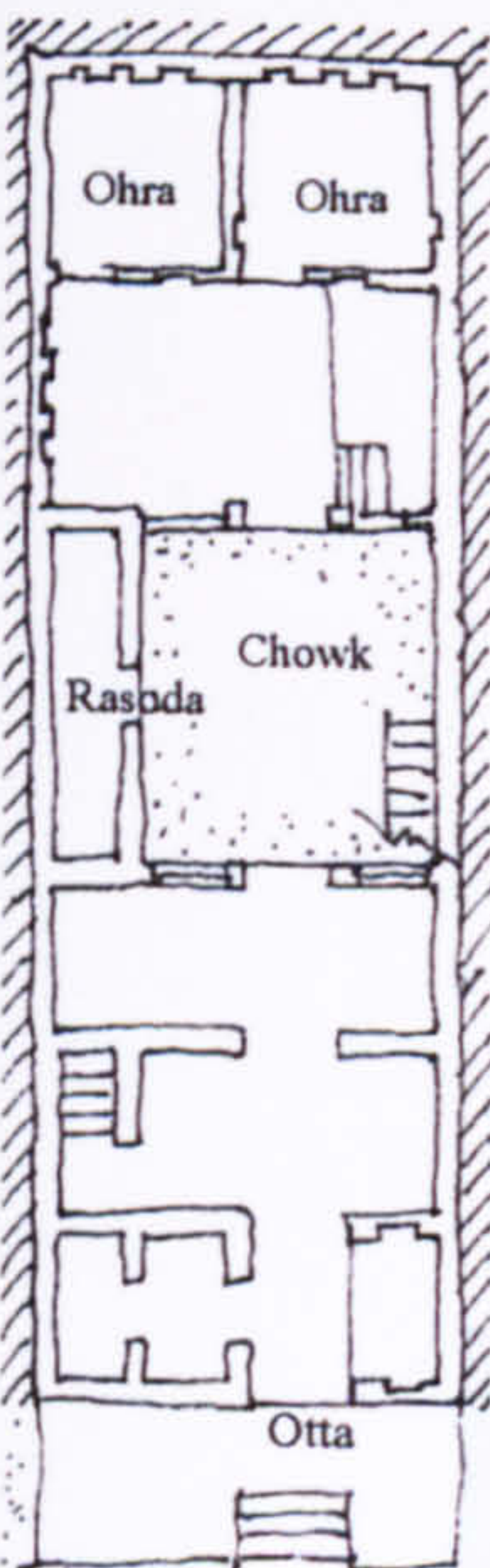
The town of Sirohi in Godwad region has narrow rectangular plots conforming to the urban fabric in neighboring Gujarat as it was part of the Gujarat *subah* during Mughal times. The *havelis* also show resemblance in spatial planning to the Gujarat dwellings with presence of a small inner court. The plinths are low in all *havelis* corresponding to the plinths in Saurashtrian dwellings. A few spatial parallels are observed such as the *ordos* or storage room at the back, *parinda* (water space) and *rasoda* (kitchen space) on the left side of the small court. Even the location and size of stairs is similar. Figure 7.5 compares the plan of a Godwad *haveli* with a typical Gujarat *haveli*.

The façades of this region are unique and do not show much resemblance to the Gujarat *havelis*. Godwad region, specifically Sirohi *havelis* have simple surface aedicules and a few composite aedicules projected at the entrances. In a few cases, they also have doubly projected composite aedicules with rectangular and *chatri* forms.

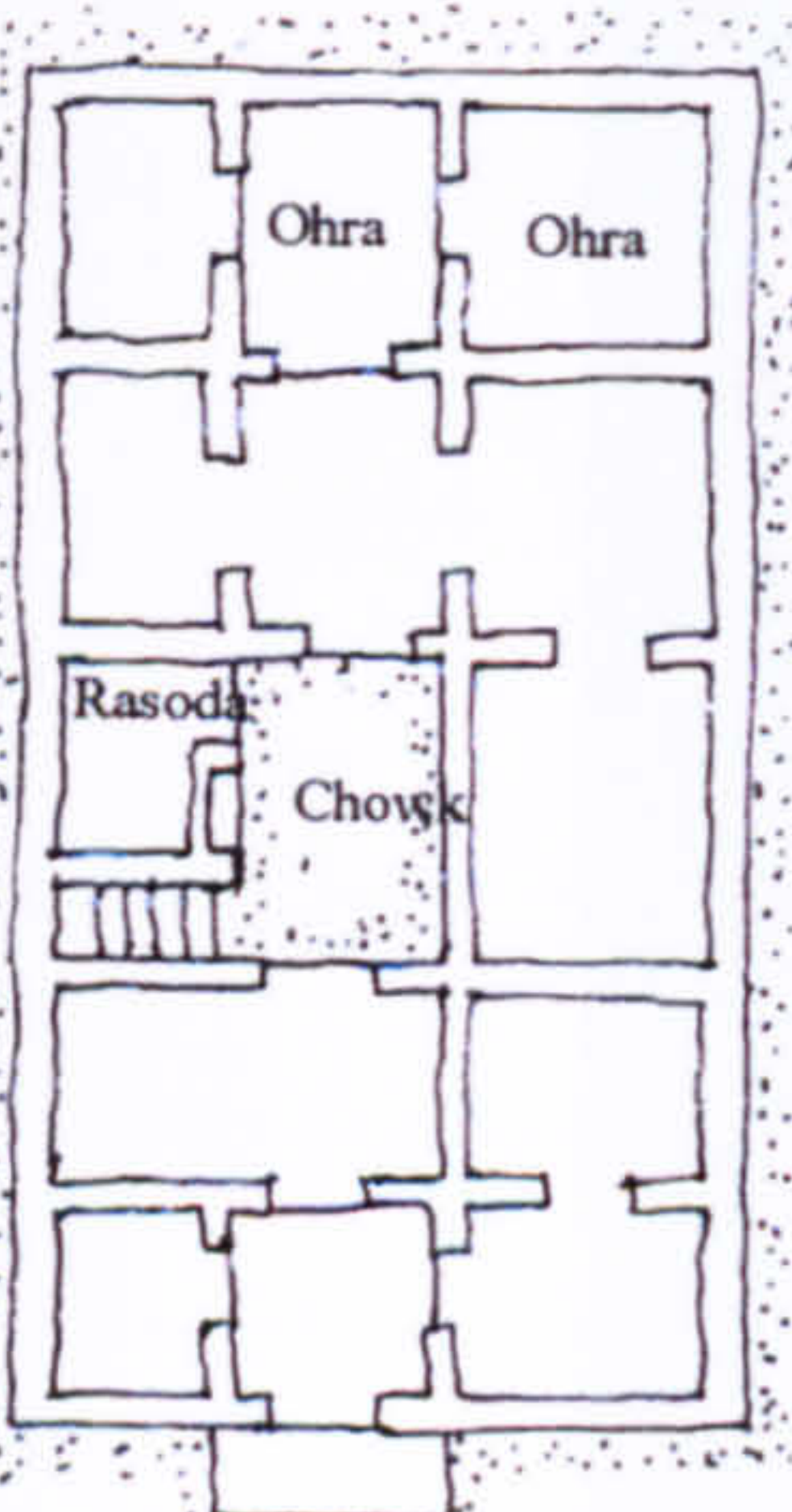




Typical Gujarat Haveli Plan



Haveli, Sojat, Marwar Region



Goram Ki Haveli, Sirohi, Godwad Region



Tolla in a Gujarat Haveli



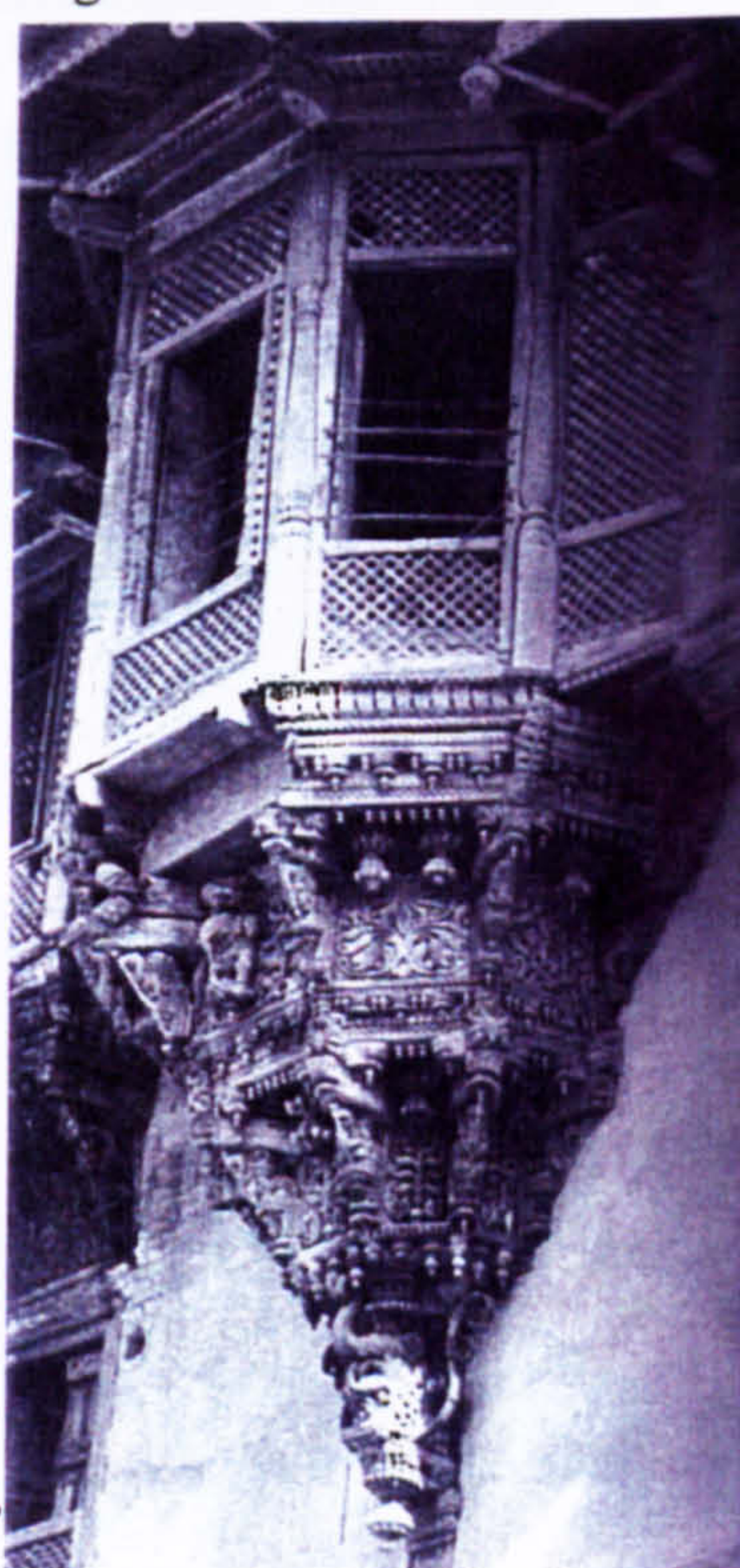
Upper room in a Gujarat Haveli (T.S. Randhawa, 1999)



Tolla in Haveli, Sojat, Marwar region



Upper room in Haveli, Sojat, Marwar region



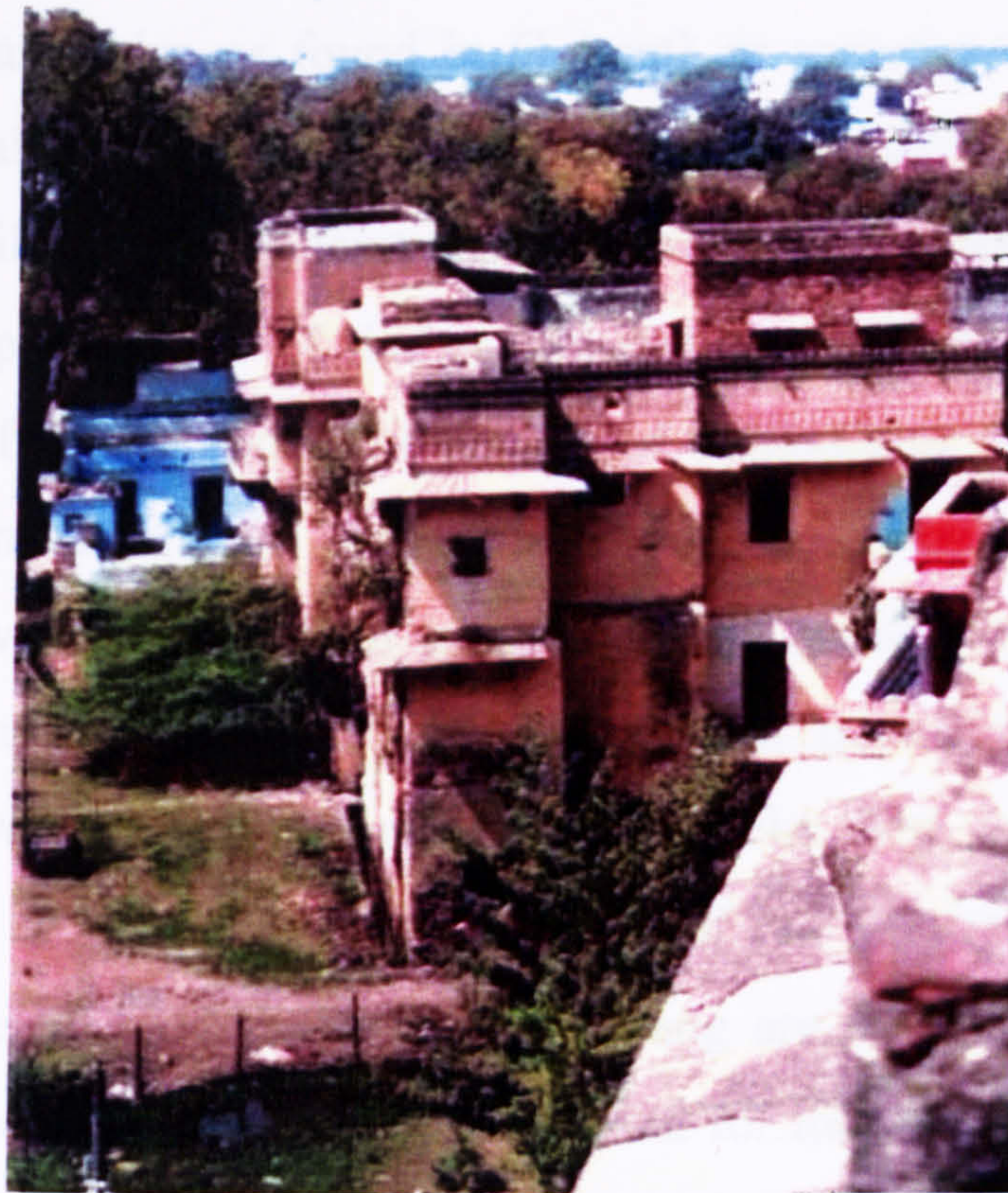
Wooden Jharokha, Palanpur palace, Gujarat (Pramar, 1989)



Stone Jharokha, Jain Haveli, Sojat, Marwar region

**Figure 7.5 - Havelis of Godwad and Marwar Regions of Rajasthan and Havelis of Gujarat**





A portion of Jhala Haveli, Kota, Hadoti Region



Gohar Mahal, A Haveli in Bhopal, Madhya Pradesh  
(Ilay Cooper, 1998)

**Figure 7.6 - *Havelis* of Hadoti Region in Rajasthan  
and *Havelis* of Madhya Pradesh**



This region again shows resemblance to construction methods in Northern Gujarat and Saurashtra region. The external walls are usually made of small sized bricks (same size as found in Gujarat) or sometimes in local quartzite stone. Structural framework is of stone or timber columns and timber beams. Roofing is similar to the Gujarat *havelis* with timber beams and rafters. The *chajjas* are sloping, made of timber and resting on stone brackets. This is a unique detail of this region. The havelis of neighbouring Gujarat are partially framed wooden structures. They follow post and beam construction with wooden framework and infill of brick and lime or mud mortar. The use of timber in a Gujarat dwelling was a structural necessity. It was used as reinforcement with bricks and mortar. The bricks used in Gujarat were of inferior quality and could not take the load of two or more floors. The only available source of good timber was the Dang are in South Gujarat. But the quantity of timber available was not sufficient for the rest of the state and land carriage was expensive. Hence it was imported from Daman and even Burma via sea carriage. The expensive land carriage could explain why stone was not used for construction even though it was easily available in the adjoining state of Rajasthan.

### **7.3 Hadoti Region and Madhya Pradesh (Figure 7.6)**

This region shared its boundary with the Mughal *subah* of Malwa. Hence identities can be established in the architectural vocabulary found in the towns of Gwalior, Datia, Orchha and Bhopal in the present Madhya Pradesh with the towns of Hadoti region. The medieval towns of Bundi and Kota in Hadoti region show irregular plots with angles, responding to site topography whereas the post Jaipur mercantile settlements like Jhalawar and Jhalrapatan have square



or rectangular plots. Hadoti region shows the simplest of façades with minimal aedicules and less ornamentation. In later *havelis* of Bundi and Kota, an increase in the aedicular density is observed. But in most cases, the façades correspond to the Rajput spatial planning, asymmetric kind in Bundi and Kota (pre Jaipur settlements) and the regular, symmetric kind in Jhalawar and Jhalrapatan (post Jaipur settlements). The *havelis* are of stone with carved *jalis* of red sandstone in the towns of Jhalawar and Jhalrapatan. Decorative finishes in Bundi and Kota includes wall paintings. The façades of Hadoti area show both simple and composite projected aedicules with rectangular and *chatri* frames. The façades in Bhopal *havelis* show composite *chatri* aedicules and pointed Islamic arches at entrances. Stone and brick masonry in lime mortar is found in this region. *Havelis* of adjoining areas in Madhya Pradesh are also of stone ashlar and bricks. Use of red sandstone is prevalent in Hadoti region as well as neighbouring towns of Madhya Pradesh. Roofing material is also similar in these areas as timber planks or stone slabs.

#### 7.4 Marwar Region and Gujarat (Figure 7.5, 7.7)

Marwar region is also close to a few areas in Gujarat and shows similarities probably due to a strong mercantile economy in both regions. Except for the *havelis* of Rajputs and a few Muslim nobles in this area, the plots are narrow, rectangular with single courts. A strong cultural exchange with northern Gujarat is evident in the *havelis* of Sojat, Jodhpur and Jaisalmer towns in Marwar region. Similarity is evident in the proportion and scale of the plot and the court. The *havelis* have a linear plan with a small central court as observed in Gujarat *havelis*. *Haveli* spaces are similar to the Gujarat dwellings with spaces like *otla* or the outside veranda, *diwankhana* (called *diwankhanu* in Gujarat),



*rasoda* (kitchen), *parinda* (water space) and the back storage rooms or *ohras*. In spatial planning – the location of *rasoda* and *parinda* is similar to the *havelis* of North Gujarat. The spatial division in the back rooms or *ohras* is also evident in *havelis* of Sojat and Jaisalmer in Marwar region.

Even in façade ornamentation the stone carving in this region is comparable to the wooden carving in Gujarat. This region has the most decorative *haveli* façades as they excelled in stone carving and ornamentation. A few Rajput style façades with minimal aedicules are present but majority of the *havelis* follow the Marwari pattern. The façades have varied aedicules - simple and composite, surface, projected and doubly projected ones. Some peculiar façade characteristics of this region include pointed *chatri* ends and a double row of brackets, which are also found in Gujarat. Another unique feature common to the two areas is the wooden *tolla* found on either side of the *haveli* entrance. Figure 7.5 shows the parallels between Marwar region and Gujarat in terms of *haveli* spaces and façade elements.

Structural framework in Marwar is of locally available stone (such as yellow stone in Jaisalmer and red sandstone in Bikaner). The yellow sandstone of Jaisalmer is a soft stone and has similar properties to timber. Use of yellow limestone is also prevalent in neighbouring areas of Saurashtra and Kutch in Gujarat. No mortar is used in the Jaisalmer *havelis* again conforming to timber construction in Gujarat *havelis*. In other areas like Jodhpur lime mortar is used. Excellent stone carving in *jharokhas*, *jalis*, columns and parapets is observed that is comparable to the wood carving of Gujarat *havelis*.





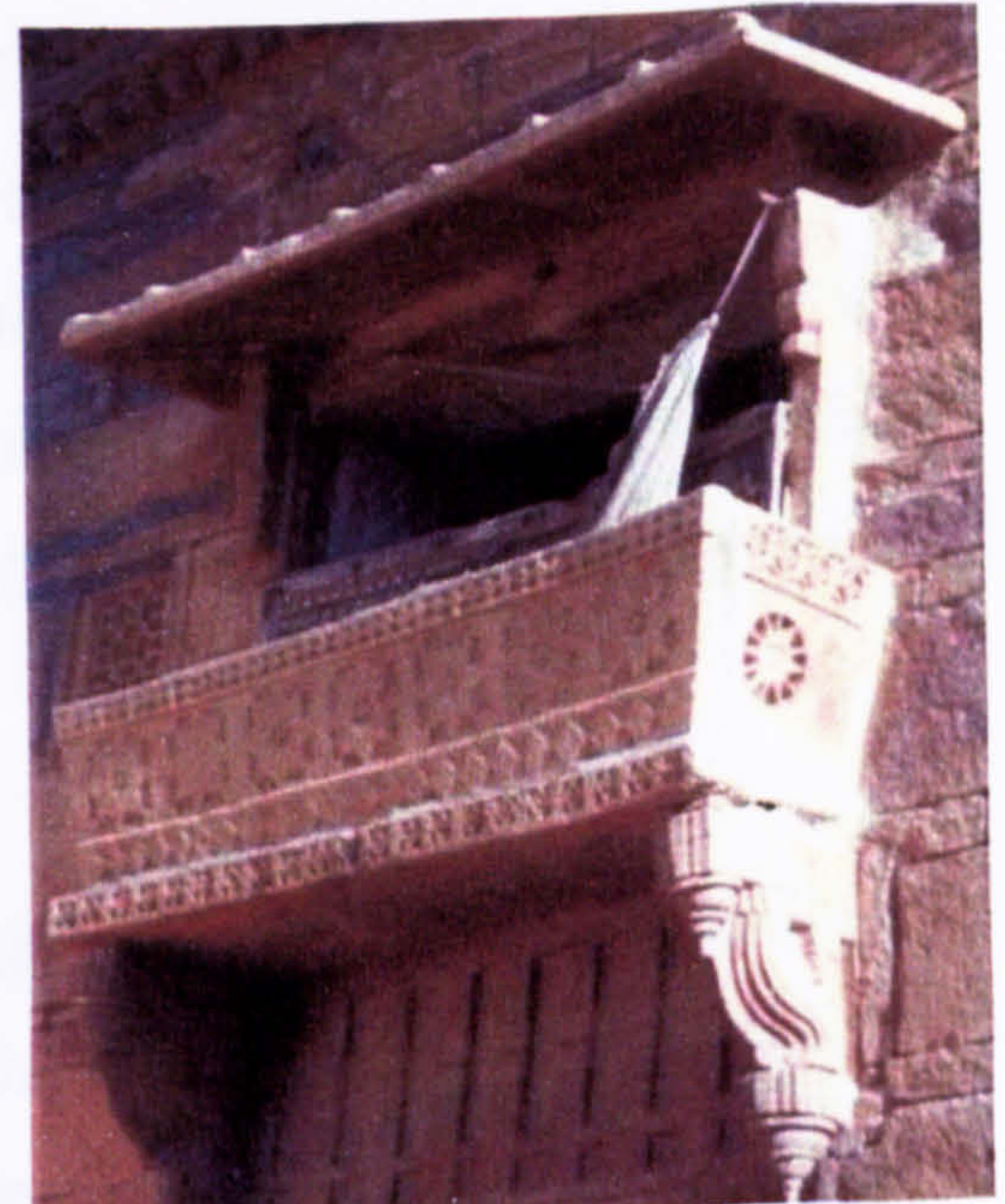
Haveli. Pethapur, Gujarat (at Shilpgram. Udaipur)



Bhandari Haveli, Salumbher, Mewar region



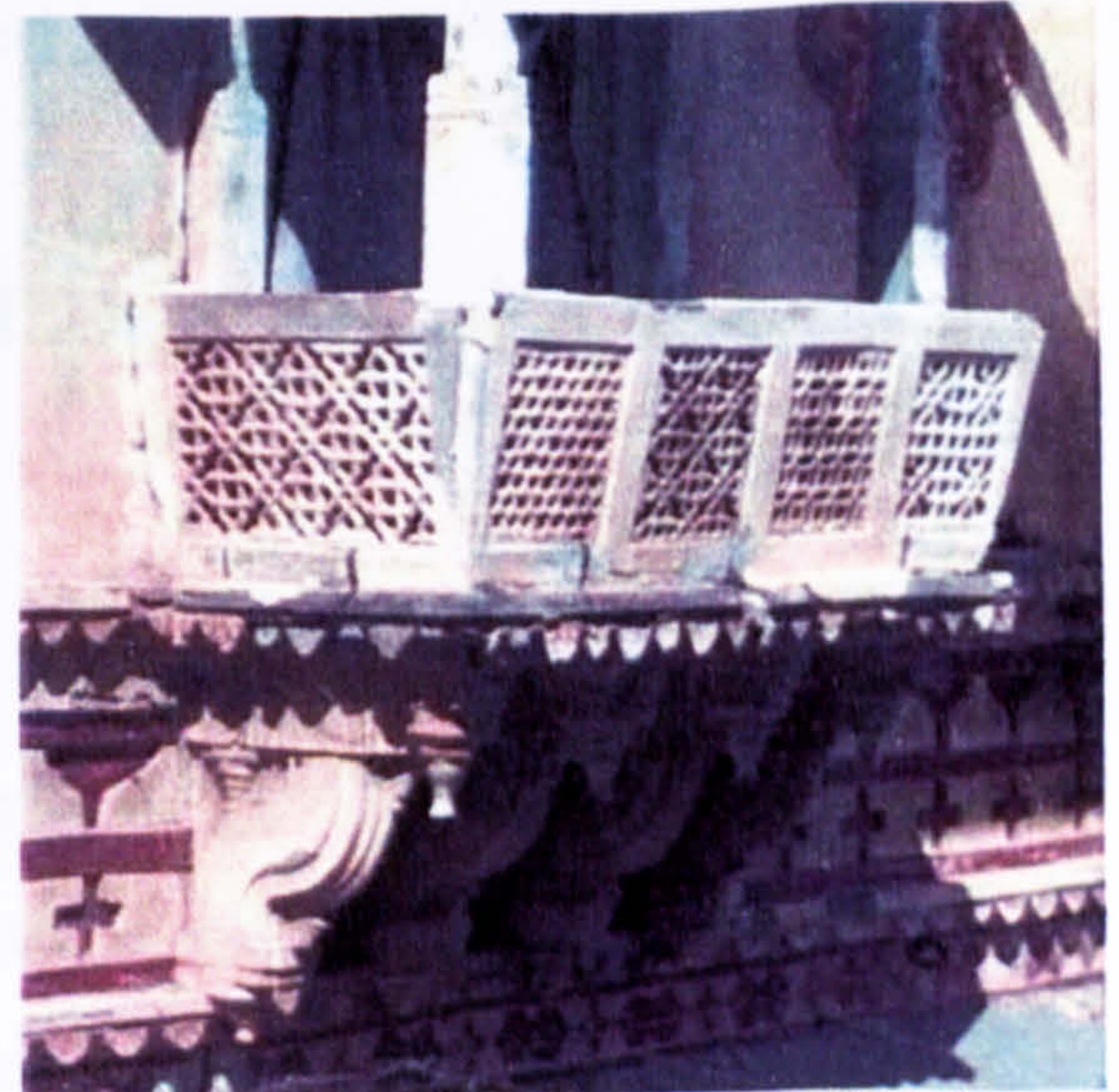
Timber columns in a Haveli, Burhanpur, Madhya Pradesh



Jharokha, Jaisalmer, Marwar region



Timber columns in Punjawat Haveli, Udaipur, Mewar region



Jharokha, Purohit Haveli, Udaipur, Mewar region

**Figure 7.7 - Havelis of Mewar and Marwar Regions in Rajasthan and Havelis of Gujarat**



## 7.5 Merwara Region

This region is located in the centre of Rajasthan hence it shows influence of the surrounding Dundhar region and Marwar region. Merwara region has an influence of Dundhar and Marwar region as it was politically linked to Jaipur and Jodhpur at different times. Since Ajmer was the centre of Mughal *subah*, a strong Mughal influence in the construction is observed. Spatially the *havelis* are similar to Dundhar region with a number of large courtyards based on the Rajput pattern. The *haveli* spaces also follow the Dundhar *haveli* plan with *tibaris* and *chaubaras*. Stylistic influences of Dundhar region are observed in *chattris* and *bangaldar* roofs. A few areas adjoining Marwar, like Nagaur have *havelis* with stone carving. Even the Patwa *haveli*, Ajmer shows influence from the Patwa *haveli* in Jaisalmer.

Structure is of stone and similar to Dundhar region. *Jalis* are of lime plaster. Timber roofing is observed in Nagaur area whereas, Kishangarh and Ajmer *havelis* show roofing of stone slabs. The façades show simple and composite aedicules that are projected and doubly projected in some *havelis*.

## 7.6 Mewar Region and Gujarat and Madhya Pradesh (Figure 7.7 and 7.9)

This region also shares boundaries with few areas in northern Gujarat. The *havelis* of this region show more similarities in façade elements and construction material as opposed to spatial planning with the *havelis* of Gujarat. It is probably because of a strong feudal base, that Mewar region shows a



different spatial fabric from the neighboring Gujarat. The *havelis* of Udaipur are built on large, sprawled out plots based on the Rajput palatial planning. The neighboring areas in Gujarat also had a Rajput feudal base earlier but the Mughals superseded them in the 15<sup>th</sup> century and the Marathas later in the British times.

The *haveli* façades also strictly conform to the asymmetrical, Rajput fortress kind with minimal placement of aedicules. The aedicules are simple and composite as both surface and projected types with rectangular or *chatri* framing. Both stone and timber are used in construction work. Although stone is predominantly used for structural framework but some *havelis* in Salumbher and Udaipur have timber columns too. Earlier *havelis* have timber roofing and the later ones have stone slabs. Intricate stone work was observed in arches, *jalis*, brackets etc., finishes like *aaraish* and *khamira* and decorative finishes like, mirrorwork, stained glass, *panni* work, *dakmeena* work were prevalent. Marble *jalis* are also found in some *havelis*. In Salumbher and Udaipur *havelis*, carved columns on the Gujarat pattern are also found. These are also found in *havelis* of adjoining areas in the state of Madhya Pradesh.

## **7.7 Mewat Brij Region and Adjoining Haryana, Delhi and Uttar Pradesh (Figure 7.2, 7.3, 7.4)**

The Mewat region of pre independence constituted of states of Alwar, Bharatpur and Gurgaon. Being close to the Delhi sultanate, this region shows a strong Mughal influence. It is observed in all aspects i.e. spatial planning, façade elements and construction technology. A few towns of this region such



as Tijara were earlier in the Mughal *subah* of Agra. Hence similarities with adjoining towns of Uttar Pradesh are also observed. Mewat region has *havelis* built on regular square or rectangular plots with large courtyards and symmetric façades. The *havelis* had spaces conforming to the Mughal palaces like the *Diwan-I-aam*, *Diwan-i-khas*, *dalan*, *dar dalan* etc. Ilay Coper (1998) mentions identical feature in the *havelis* of Farrukhabad in Uttar Pradesh.

Façades also borrow elements from Mughal architecture and the *bangaldar* roof from the adjoining Dundhar region. A distinct feature of these façades is the extra usage of brackets in the projections, a possible outcome of the stone size available. *Havelis* of Brindaban in the adjoining state of Uttar Pradesh show stylistic trends in the façades similar to the Alwar *havelis*. An extensive use of brackets in the façade and entrances with Bengal roofed *chattris* are common to *havelis* in both regions. Like the Dundhar region, the *haveli* façades have simple and composite aedicules but the doubly projected aedicule is absent.

These *havelis* also show parallels with the Mewat region in Haryana, observed in the adjoining settlements like Khoh, Ferozepur Jhirka, Nuh and Pataudi.. The Muslim *havelis* in Lucknow, Uttar Pradesh also show resemblance with the *havelis* of Tonk *Nawabs* of this region. These Muslim *havelis* follow the Mughal spatial planning of the Delhi region with spaces like *dalan*, *dardalan*, big courtyards with gardens and fountains. These *havelis* are made with smaller sized *lakhori* bricks. Sarayu Ahuja (1997) mentions that the larger bricks used in Lucknow were called *pan-patta* or *ilmasi*. The masonry work was similar to Mughal construction in the Delhi region. Alwar *havelis* have brick masonry and brick roofing or stone slabs. They also have ornamented ceiling with



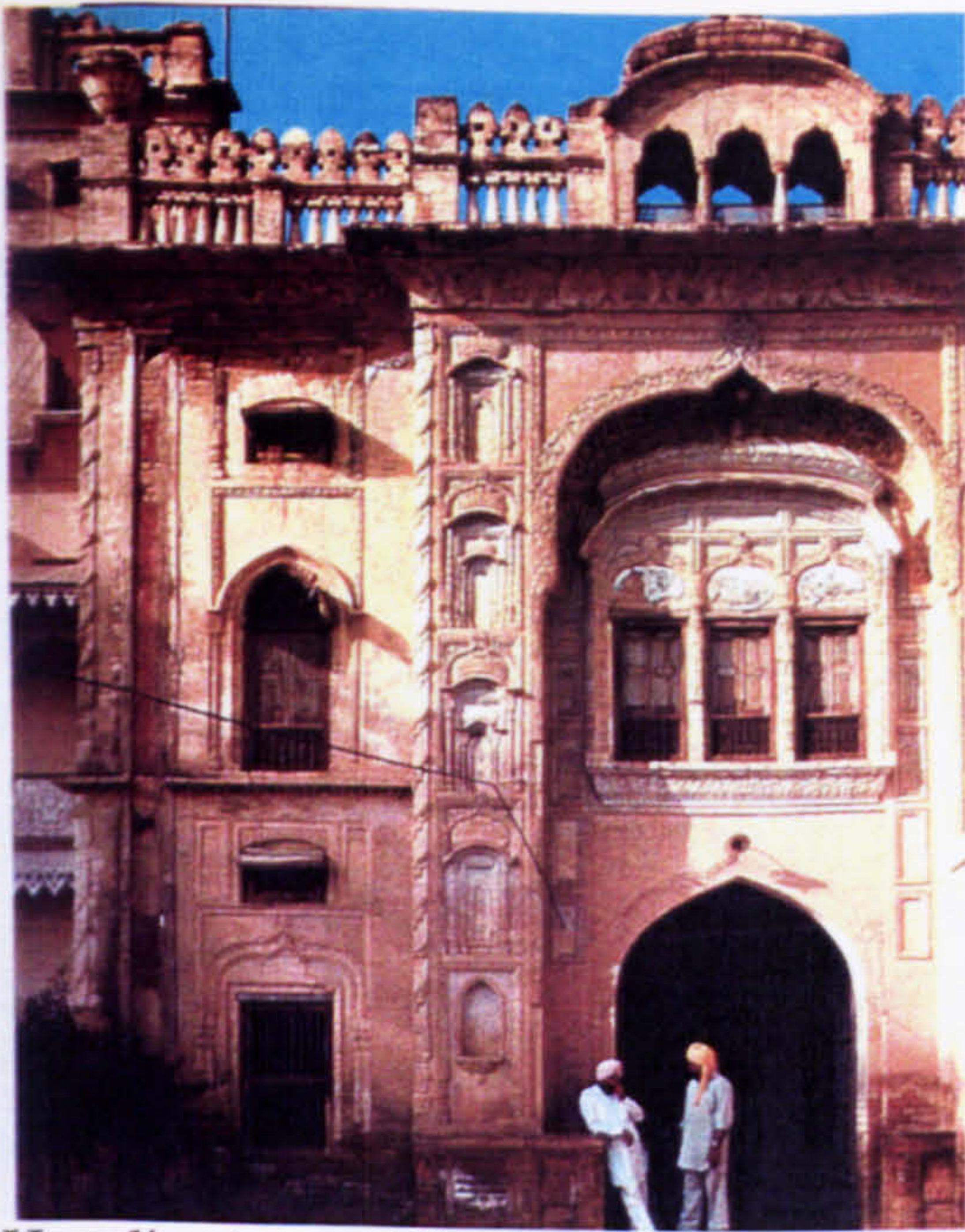
geometrical patterns. Other areas like Sawai Madhopur and Tonk have stone masonry work. Red sandstone is used in the cusped and pointed arches.

## 7.8 Shekhawati Region and Punjab (Figure 7.8)

A few towns of Shekhawati region such as Churu and Sardarshahar show similarities with the agriculture based regions of neighboring Punjab and Haryana state. The *havelis* in Shekhawati and Punjab were also built around the same time period after 1800 A.D. According to Ilay Cooper (1998), the earlier *havelis* of Shekhawati were more fortress like with less openings and had wood plank ceiling bearing the date of construction. The spatial planning of the *havelis* in the later period is identical to Dundhar region with large courtyards and multi court *havelis*. Shekhawati region follows the post Jaipur pattern with symmetric and formal façades. The façades show an increase in aedicularity with painted aedicules composed in a dense pattern. Huge entrances with big gates and a smaller opening are common in *havelis* of this area.

Masons from Jaipur and surroundings carried the construction activity in Shekhawati region. In most *havelis* of this region, *dhandhala bhatta* i.e. 'grey, irregularly shaped pieces of stone with higher lime content' are used with lime mortar in making wall and vaulted ceiling construction. Localized species of timber are used for carved beams and door and window frames.. Earlier *havelis* had timber ceilings which which were replaced by the vaulted ones by in the later half of the 19<sup>th</sup> century. Stuccowork in lime plaster and *arraish* finish is similar to Jaipur *havelis*. Stone is used for pillars, brackets, balconies and *jali* windows. Decorative wall frescoes in vegetable dyes are unique to these *havelis*.





Haveli entrance, Khunjan, Punjab  
(T.S. Randhawa, 1999)



Lal Haveli, Lahore, Pakistan  
(Lahore Development Authority)



Haveli entrance, Churu, Shekhawati region



Brick Havelis in Bidowali, Punjab  
(T.S. Randhawa, 1999)



Tungaich Haveli, Nawalgarh, Shekhawati region

**Figure 7.8 - Havelis of Shekhawati Region in Rajasthan and Havelis of Punjab and Pakistan**

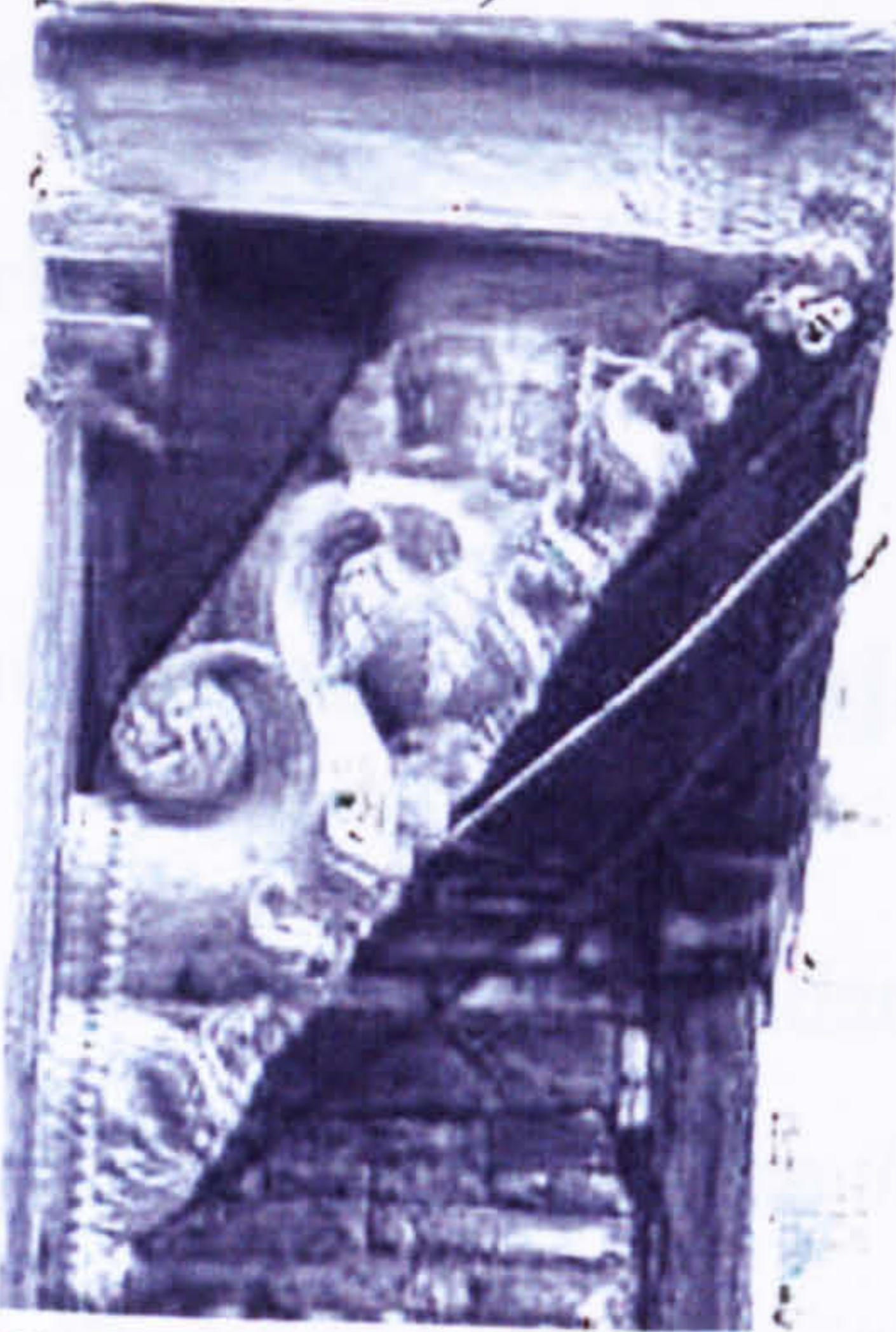




Vohravad, Sidhpur, Gujarat  
(Pramar, 1989)



Dungarpur, Vagad region



Wooden bracket, Unjha, Gujarat



Wooden bracket, Salumbher, Mewar region



Wooden bracket, Pethapur, Gujarat



Stone bracket, Banswara, Vagad region

**Figure 7.9- Havelis of Vagad and Mewar Regions in Rajasthan and Havelis of Gujarat**



Punjab is located on the North Western border of India, an area prone to foreign invasions hence, Punjab *havelis* follow the robust fortress like image following the Rajput pattern, build basically for defense. They were mostly owned by agriculturists and had huge front courts for storing of grains and keeping agricultural equipments. No brackets are observed, as stone is not available locally. Brick piers are used for offsetting. These *havelis* often had domed chambers, decorative floral murals and decorative woodwork at entrances. Small sized bricks (*Lakhori-eent*), are used and stunted, cusped pointed arches are most common. The *havelis* are palatial with huge gates. The forecourt in most cases is used for keeping agricultural products. Recessed bricks with relief ornamentation and brick *jali* are also found. The double cusped flattened arch was used in the entrances as observed in *havelis* of Churu in Shekhawati, *havelis* of a few towns in Punjab and Lahore in Pakistan which was part of Punjab earlier.

## 7.9 Vagad Region and Gujarat (Figure 7.8)

This region also shares boundaries with Gujarat and similar stone and timber construction is observed. The *haveli* façades in the towns of Banswara and Dungarpur in Vagad Region show projected aedicules of both simple and composite kinds. Although Banswara *havelis* show the Marwari aedicular pattern, the Dungarpur *havelis* conform to the Rajput fortress pattern. Figure 7.8 shows some similarities of this region with Gujarat.

Thus distinct subregional variations are easily identifiable in the *havelis* of Rajasthan. These differences are significant in establishing the regional identity of each place, indicating the diversity that exists in the state of Rajasthan.



## 8 Conclusions

This research on the *haveli* form in Rajasthan had two underlying objectives – to interpret the generic form and its inherent meaning using a multidisciplinary approach and to develop a comprehensive taxonomy that identifies the sub regional variations in the *haveli* form of Rajasthan. This work is a first attempt at a comprehensive classification of the *havelis* of Rajasthan. The fieldwork covered around forty towns in the nine regions of Rajasthan including towns such as Dungarpur, Banswara and Sirohi where no *havelis* have been listed till today.

### 8.1 Achieving the Objectives

The generic form of the *haveli* and its centric evolution is established by a detailed study of the rituals, physical built form and construction process. The meaning of the form correlates to the traditional Indian concept that everything emerges from and merges into the centre. The repeated emphasis on the centre in the *haveli* form is reflected in the manifestation of architectural form and in the rituals performed by the owner and his family throughout their life cycle. All three methodological approaches - a) the spatial study using rituals and etymology (anthropological approach) b) the formal language of the façade (formal approach) and c) the methods of construction (technological) prove the concentric growth of the *haveli* form. The demarcation of the *haveli* centre is the primary step reflected in the owner's rituals, the existing built form and the mason's methods of construction.. This pattern is congruent with archetypal ideas in Indian thought, to the extent that the architecture can be said to have an intrinsic meaning.<sup>1</sup> The patterns of growth identified at different levels – urban level of the town, cluster level and at the *haveli*

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<sup>1</sup> Hardy, Adam. in *Paradigms of Indian Architecture*, 1995 p.107



level follow this principal of centrifugal expansion. The overlapping of social and political centre with the geometric or topographical centre is evident at all levels. The ruler's palace at the town level and the most influential *haveli* owner at the cluster level mark the centre topographically. The central core of the *haveli* is the courtyard, a fact that is evident in the formal language of most single court *havelis* with the court as the physical centre. But, the research also proves that the multi court *havelis*, despite the sprawled out asymmetrical form also, have a definite centre. This centre is the inner court which is always the *zenana* court, and in which all fire-rituals of Hindus and festive gatherings of Muslim families take place. This centre also guides the formal composition of the symmetric or asymmetric façades of these *havelis*. Topographically, it is always located at the highest point on the site. This inductive approach provides a new interpretation of the form and meaning of the *havelis*. The research uses a balanced multidisciplinary approach that includes an anthropological angle by study of spatial rituals, a formal analysis of the architectural linguistics and a study of the method of construction. The methodological approach selected for this research not only provides an interpretation of the form and meaning, but also evolves a framework that can be used more widely for the study of traditional Indian architecture. A simple method of identifying the centres and sub centres rooted in the cultural traditions is applied to interpret the form. An application of this method can be used for deducing the plan form by looking at the façade as explained in chapter five of this work.

Besides an understanding of the form and meaning, the research also provides an appropriate classification of the form in different regions of Rajasthan. Two broad *haveli* patterns that are identified relate to the patronage – the Rajput *haveli* and the Marwari *haveli*. As the Rajputs were the forerunners in building the *havelis* and the Marwaris were the promoters in the later centuries, the *havelis* conform to these two



types. The Rajput fortress type *haveli* was inspired by the Rajput forts – sprawled out, asymmetric, non-axial and with minimal openings or aedicular elements in the façade. The second type coinciding with the chronological evolution of Jaipur and post-Jaipur settlements flourished under the Marwari patronage. This form is symmetrical, axial with aedicularity reaching its peak in *haveli* façades such as that of the Patwa *Haveli*, Jaisalmer or the painted ones in Shekhawati region.

Besides these two broad patterns, the *havelis* are categorized using factors influencing the form like caste and ownership, topography and materials. Sub regional identities of the *haveli* form with local material and style (period) are also identified. A brief comparison of *havelis* across the borders shows the similarities of the form in different sub regions with adjoining areas of border states. The research thus provides a classification pattern that is useful in identifying the *havelis* in different regions of Rajasthan and belonging to different castes and regions. This can be utilized in future documentation of traditional form.

Besides achieving these objectives, the research also documents some of the *havelis* from the experiential perspective of the viewer (Chapter Two). This interactive presentation inspired by the Rajput painting style is a useful tool in understanding the traditional form and provides an innovative approach for documentation of the traditional buildings in Rajasthan.

## 8.2 Present Condition of the *Havelis* and Conservation Measures

The *havelis* in Rajasthan region are weathering down with time. A large number of these *havelis* are still homes of the original owners. Some of them are vacated and the owners are living in other towns with the *havelis* locked up and, in some cases,



the *havelis* are being used for commercial activities. Clearly, these *havelis* demand conservation measures. In some cases, like *Amet Haveli*, Udaipur and *Samode Haveli*, Jaipur, the owner has taken an initiative to conserve the *haveli* and has converted it into a hotel. Since tourism industry is an important source of income in Rajasthan, converting the *havelis* into heritage hotels has recently become lucrative for the owners. In some cases, the *havelis* are used as schools or art centres. But, these are piecemeal strategies and a more comprehensive framework for conserving the city fabric is needed. The classification of the *havelis* in this research work can help in identifying the typology of the *havelis* and in evolving appropriate conservation and adaptive reuse methods.

### 8.3 Future Research and Relevance in Contemporary Practice

Although a rich variation of samples is covered in the fieldwork, yet the number of undocumented *havelis* in the region is quite large. There are a number of small towns and *thikanas* of Rajasthan which need to be documented. This research provides possibilities of further detailed work on the documentation of these *havelis*.

The contemporary Indian architect perpetually faces the dilemma of balancing the traditional Indian views and western norms of construction in architectural practice. Although his training in architectural schools, equips him with western principles and tools, he has to deal with the traditional labourers and masons and their vocabulary on site. Despite the acceptance of western modes of life, the majority of Indians are still bound in traditions and rituals. The architect has to design for clients with traditional minds. In such circumstances, an understanding of the traditional form such as the *haveli* can provide indigenous design solutions for contemporary residential architecture.



# Glossary

<b>Aangan</b>	Open space in a house
<b>Aath</b>	Eight
<b>Aavaas</b>	House or Dwelling
<b>Ala</b>	Niche
<b>Alagila</b>	Frescoes
<b>Alind</b>	Verandah
<b>Aliya</b>	Small Niche
<b>Angula</b>	Finger / Traditional unit of measurement
<b>Arraish</b>	Finish in lime and marble powder + ground seashells.
<b>Arz</b>	Width
<b>Atharah</b>	Eighteen
<b>Athmasa</b>	Eighth month of Pregnancy
<b>Awani</b>	Locating the centre
<b>Ba</b>	Of
<b>Bagalia</b>	Screened and projected windows
<b>Baha</b>	Open space
<b>Bahikhata</b>	Accounts record
<b>Baithak</b>	Sitting room
<b>Bagari</b>	Part of an arch
<b>Bajri</b>	Sand
<b>Balli</b>	Bamboo stick support during construction
<b>Bandanwar</b>	A row of leaves tied with a thread placed on the door lintel at auspicious occasions.
<b>Baniya</b>	A Hindu trader
<b>Bangaldar</b>	Curved roof from vernacular Bengal architecture
<b>Baori</b>	Well
<b>Bara</b>	Open yard
<b>Bari</b>	Small opening in wall
<b>Baro</b>	Door
<b>Barsali</b>	Entrance lobby
<b>Bazzar</b>	Market
<b>Beldar</b>	Labour
<b>Bhandar</b>	Store
<b>Bhandari</b>	Surname, originating from caretakers of the royal stores or bhandars
<b>Bhanwara</b>	Basement room
<b>Bhit</b>	Wall
<b>Bhittichitra</b>	Tempera paintings
<b>Bhumi Pujan</b>	Religious Hindu ritual before commencing construction work on any site.
<b>Bigha</b>	A unit for measuring area
<b>Bindu</b>	Point
<b>Bija</b>	Seed
<b>Bohra</b>	Trader class from Gujarat, of Hindu or Muslim caste.



<b>Brahmin</b>	Highest Hindu caste, responsible for conducting all religious activities.
<b>Brahmasthan</b>	Space for Lord Brhama
<b>Burj</b>	Dome
<b>Buniyaad</b>	Foundation
<b>Chandni</b>	Terrace space with high walls and no roof
<b>Chajja</b>	Sunshade
<b>Chat</b>	Terrace/ Roof/Ceiling
<b>Chakka</b>	Plinth
<b>Chatri</b>	Domed structure, also used for cenotaphs in Rajasthan
<b>Chaubara</b>	Back room in havelis
<b>Chauki</b>	Plinth
<b>Chautar</b>	Square chatri
<b>Chaparkhat</b>	Oblong chatri
<b>Chaukhandi</b>	Four sided structure
<b>Chaukhat</b>	Door frame or window frame
<b>Chettiar</b>	Courtyard house of Tamil Nadu
<b>Chik /Tattiya /Khas</b>	Split bamboo net used as a screen
<b>Choona</b>	Lime plaster
<b>Churidar mehrab-</b>	Cusped arch
<b>Chitera</b>	Painter
<b>Cheja</b>	Brick course
<b>Chejara</b>	Mason
<b>Chowk</b>	Courtyard in a dwelling or central open space in a town.
<b>Chowkri</b>	A neighbourhood in Jaipur City
<b>Choon ka tibara</b>	Room for storing flour
<b>Chukkewala</b>	Style of arch in local language
<b>Chulha-chowka</b>	Kitchen and accessories
<b>Chulhe Ke</b>	Lord of the kitchen stove
<b>Bhaionji</b>	
<b>Dadupanthi</b>	A religious sect of Rajasthan
<b>Dakshin</b>	South
<b>Dalan</b>	Verandah
<b>Dardalan</b>	Outer verandah
<b>Darwaaza / Dar</b>	Door
<b>Dasa</b>	Threshold stone
<b>Dehari</b>	Daily wages
<b>Deda</b>	One and a Half
<b>Dehli</b>	Threshold (Hindi)
<b>Dehleez</b>	Threshold (Urdu)
<b>Deodhi</b>	Threshold of female section (Rajasthani)
<b>Dhabhai</b>	Hindu sub caste
<b>Dhai Maa</b>	Royal nurse
<b>Dhandhala-bhatta</b>	A local stone in Shekhawati
<b>Dhok</b>	Showing respects to the elders by touching their feet.
<b>Diwali</b>	Hindu festival of Goddess Lakshmi



<b>Diwan-e-Aam</b>	Space for receiving outsiders
<b>Diwan-e-Khas</b>	Space for entertaining special guests
<b>Darikhana</b>	Living room
<b>Diwankhana</b>	Male sitting/Living Room
<b>Doli</b>	parapet
<b>Durbar</b>	Court
<b>Farsh</b>	Floor
<b>Gandi gali</b>	Service lane
<b>Gangaur</b>	Rajasthani festival for newlywed and unwed females.
<b>Gara</b>	Paste of lime and sand
<b>Gaz</b>	A unit of measurement equal to 24 Tasu. (36")
<b>Gheewala kamra</b>	Room for cooking oil
<b>Ghotai-Chitra</b>	Fresco painting finished with burnishing and polishing.
<b>Ghubaria</b>	Store/ Loft
<b>Ghudsal</b>	Stables
<b>Godbharna</b>	A ritual of offering sweetmeats to the expectant mother
<b>Gokha</b>	Raised seating at entrance
<b>Gokhdas</b>	Projected balcony with seating
<b>Golchi</b>	Traditional tool of masons
<b>Gomukha</b>	Shaped like the cow's mouth, narrowing down in front
<b>Goonthi</b>	Traditional tool of masons
<b>Griha/Ghar</b>	House
<b>Griha Pravesh</b>	Ritual before entering a new house
<b>Gujjar</b>	A Hindu sub caste hailing from Gujarat
<b>Gumtha</b>	Dome
<b>Gumbad</b>	Dome
<b>Guru</b>	Teacher
<b>Hakim</b>	Doctor
<b>Hammam</b>	Bath
<b>Hasta/ Hath</b>	Hand/ Traditional unit of measurement
<b>Hathi</b>	Elephant
<b>Hathini</b>	Broad stone slab in steps at intervals for resting
<b>Havan Kund</b>	Square space for Hindi fire rituals
<b>Haveli</b>	Mansion of a courtier
<b>Holi</b>	Hindu festival in the month of March
<b>Izzara</b>	Dado
<b>Jaag</b>	House
<b>Jagirdar</b>	Land owner
<b>Jali</b>	Net or screen in stone , wood or other materials
<b>Jhajada</b>	Stone in Shekhawati grounds
<b>Jharokha</b>	Projected and screened window
<b>Jhinki</b>	Marble dust used for plaster.
<b>Jina</b>	Staircase
<b>Ji</b>	Attached with names to show respect.
<b>Jooties</b>	Traditional footwear of Rajasthan
<b>Kaaba</b>	Religious place of Muslims
<b>Kadiya</b>	Part of chatri
<b>Kalash</b>	A vessel filled with water / Finial of chatri



<b>Kalli</b>	Baked lime
<b>Kamthan</b>	Traditional Stone artisan
<b>Kanwal</b>	Oriel windows
<b>Kara/Kada</b>	Paste of lime and marble powder as base for arraish work
<b>Karipat</b>	Roofing framework with bricks.
<b>Kaasthfalak</b>	Wooden petal
<b>Kelu</b>	Clay tiles
<b>Khamira</b>	A type of lime paste
<b>Khaai</b>	Common toilet
<b>Khaat</b>	Foundation
<b>Khajur</b>	Palm
<b>Khana</b>	House or room
<b>Khaprel</b>	Clay tiles roofing
<b>Kheep</b>	Cowdung used in erection of formwork in construction.
<b>Khidki</b>	Window
<b>Kholu</b>	Type of bricks
<b>Khor</b>	Brick bats
<b>Khora</b>	Clay pots
<b>Khurra</b>	Ramp
<b>Ki/ Ka</b>	Of
<b>Kotri</b>	Community water store
<b>Kothi/Kothar</b>	Storage spaces
<b>Kothari</b>	Surname of a Hindu sub caste, originating from the caretakers of the royal kothars
<b>Kauriyon ka</b>	
<b>Choonā</b>	Marble lime
<b>Kshatriya</b>	Warrior caste in Hindus
<b>Kul-devi</b>	Clan-goddess
<b>Kurte</b>	Stone beam
<b>Ladnu</b>	Brick roofing in Mughal style
<b>Lakhori-eent</b>	Small sized bricks manufactured in Lahore
<b>Lehariya</b>	A wavy pattern
<b>Loi</b>	Paste of Kali
<b>Mahajan</b>	Hindu trader class
<b>Makar Sankrant</b>	A Hindu festival in January
<b>Mathot</b>	Door lintel
<b>Mahal / Mol</b>	Space for entertaining guests on upper floor in havelis
<b>Rang Mahal</b>	Space for dance performances
<b>Madrasa</b>	Muslim institution
<b>Mahrana</b>	King
<b>Maharani</b>	Queen
<b>Mandap</b>	Square platform with covering erected for conducting Hindu marriages
<b>Mandala</b>	Hindu diagrams
<b>Mandana</b>	Flooring patterns made on festivals with cow dung and red earth
<b>Mardana</b>	Male section



<b>Marwaris</b>	Hindu trader class originating from Marwar region
<b>Masa</b>	Hindu month
<b>Masjid</b>	Mosque
<b>Maulvi</b>	Muslim Priest
<b>Merno</b>	Door
<b>Me'mar</b>	Expert mason or carver
<b>Methi/ Urad</b>	Names of pulses
<b>Mistri</b>	Mason
<b>Mithai</b>	Sweets
<b>Mochwa</b>	Part of chatri
<b>Mor/Mori</b>	Common toilet
<b>Muladhar</b>	Root base
<b>Mullah</b>	See. Qazi
<b>Mushaira</b>	Muslim mode of poetry
<b>Naag</b>	Part of an arch
<b>Naal</b>	Staircase
<b>Namaz</b>	Religious prayers of Muslims
<b>Nagarseth</b>	Wealthy financier of town
<b>Nagpanchami</b>	A Hindu festival of worshipping snakes and Lord Shiva
<b>Naubatkhana/</b>	Space for announcements with an instrument called
<b>Naqqarkhana</b>	'Naubat'
<b>Naqsha</b>	Map or Plan
<b>Nautch</b>	Dance
<b>Navgriha</b>	New House
<b>Navratras</b>	Hindu festival period for 9 days twice an year
<b>Nawabs</b>	Affluent Muslim ministers or administrators
<b>Nehla</b>	Construction tool
<b>Nelekettu</b>	Courtyard house form in Kerala
<b>Niv</b>	Foundation
<b>Niwas</b>	House
<b>Nohra</b>	Annexe area with haveli, used for services
<b>Onchahu</b>	Part of chatri
<b>Otta</b>	Front platform in a dwelling
<b>Ovaro/ Ohra/Ordo</b>	Back rooms behind court
<b>Pachikari</b>	
<b>Paanigrahan</b>	Hindu marriage ritual
<b>Paglya</b>	Representations of footsteps on floor
<b>Palki / rath</b>	Manual carriage/ Horse carriage
<b>Paniyaari Chal</b>	A footstep for measurement
<b>Papad</b>	Dried flour cakes
<b>Pardi</b>	Partition wall of stone slab
<b>Parinda</b>	Water space
<b>Pasarna</b>	Special flooring pattern at homecoming of bride
<b>Pashchim</b>	West
<b>Patda</b>	Lintel
<b>Patti</b>	Stone slab
<b>Patta</b>	Head plate/ Piece of paper showing site zoning
<b>Pida</b>	Wooden rafters



<b>Pidakhiyas</b>	Steps
<b>Pedkala</b>	Sitting Space above stairs
<b>Phera</b>	A marriage ritual of circumambulating of bride and groom around fire.
<b>Pitar ji ki Modh</b>	Space for ancestral deity
<b>Pol</b>	Entrance gate
<b>Poli</b>	Lobby/Foyer
<b>Poorva</b>	East
<b>Pothikhana</b>	Library
<b>Prasada</b>	House in Sanskrit
<b>Pucca</b>	Solid/ Permanent
<b>Puja</b>	Prayer space
<b>Pujari</b>	Hindu priest
<b>Puna/Puni</b>	A quarter less than the whole
<b>Purdah</b>	Curtain veil observed by females
<b>Purohit</b>	Hindu Priest
<b>Purusa</b>	Hindu myth relating to construction
<b>Pushti Marg</b>	A way of living of the Vaishnava sect
<b>Pushya Nakshatra</b>	Specific days in Hindu calendar
<b>Qanat</b>	Fabric tent
<b>Qazi</b>	Muslim Priest
<b>Quran</b>	Holy book of Muslims
<b>Raasta</b>	Path
<b>Radda</b>	A course of bricks
<b>Rakshabandhan</b>	A Hindu festival for brothers and sisters.
<b>Raj,</b>	Stone carver
<b>Rajaji</b>	King
<b>Rajbari</b>	Courtyard house of Bengal region
<b>Rajguru/</b>	Royal priest
<b>Rajpurohit</b>	
<b>Rajput</b>	Warrior class of Rajasthan
<b>Rana</b>	King
<b>Rangoli</b>	Colourful decorations on floor
<b>Rasoda/Rasoi</b>	Kitchen
<b>Ravish/ Rons</b>	Projected balcony around the court
<b>Rod</b>	A construction tool
<b>Rori</b>	Brick ballast
<b>Sal /Phool Sal</b>	Big room with vaulted ceiling
<b>Sandla</b>	Lime paste for final finish on walls
<b>Sangtarash/ Silat/</b>	
<b>Silawat</b>	Stone carver
<b>Sardal</b>	Door lintel
<b>Sawaya</b>	A quarter extra from the whole
<b>Sehen</b>	Courtyard
<b>Seth</b>	A wealthy merchant
<b>Shala</b>	One wing of house
<b>Shamiana</b>	Fabric tent



<b>Sherbets</b>	Sweet liquid drink
<b>Shilpi</b>	Traditional builder
<b>Shivalinga</b>	Image of Lord Shiva
<b>Sidi</b>	Stairs
<b>Sirdal</b>	Lintel
<b>Sthapati</b>	Traditional architect
<b>Subah</b>	Term for a state in Mughal period
<b>Surkhi</b>	Brick dust
<b>Sut</b>	(3mm) is a term that is still used for measurement.
<b>Sutradhar</b>	Supervisor on traditional construction sites
<b>Swastika</b>	An auspicious Hindu symbol
<b>Tabridar</b>	Shaped like the musical instrument 'tabla'
<b>Tak</b>	Niche
<b>Talghar/</b>	
<b>Tehkhana</b>	Underground space
<b>Tankabar</b>	Style of arch
<b>Tasu</b>	Traditional unit of measurement
<b>Teej</b>	Rajasthani festival in July-August
<b>Teen</b>	Three
<b>Tekri</b>	Small sanddune
<b>Terah</b>	Thirteen
<b>Thakur</b>	Estate owner
<b>Theka</b>	contract
<b>Thikana</b>	Estate of Thakur
<b>Tibari</b>	Three arched verandah
<b>Todi</b>	Bracket
<b>Toran</b>	Ritual of tying an image of birds at the entrance gate of the dwelling at the time of marriage. The groom touches the toran with a sword before entering the bride's house.
<b>Tosh Khana</b>	Room for storing valuables
<b>Tukri</b>	Stone slabs used in roofing
<b>Tul</b>	Length
<b>Tulsi</b>	A basil plant, auspicious for Hindus
<b>Uttar</b>	North
<b>Vaishya</b>	Hindu trader Class
<b>Vastu</b>	Architecture/ Construction
<b>Vastu- Shanti</b>	Hindu ritual before commencing construction
<b>Veda</b>	Traditional Hindu texts
<b>Vedi</b>	Altar
<b>Vedha</b>	Obstruction
<b>Vedic</b>	According to the traditional Hindu text of Vedas
<b>Vidhi</b>	Method
<b>Vivaah</b>	Marriage
<b>Wada</b>	Courtyard dwellings of Maharashtra region
<b>Yajna</b>	Fire ritual performed on a grand scale by the King
<b>Zenana</b>	Female section



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The Bibliography is divided into two sections: one listing the primary sources of the research work and second that lists the secondary sources for the research work.

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APPENDIX – A – Gazetteer of *Havelis* covered in the Fieldwork

DHUNDHAR REGION

Amber

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Bhatt Haveli	16 <sup>th</sup> century	Rajpurohit	-	Double Court	Rajput	Paintings in 1 <sup>st</sup> Floor Room
2.	Chomu Haveli	16 <sup>th</sup> century	Current owner is Ratan Singh Parsai. Earlier belonged to Chomu Thakur	-	Double Court Rajput	Rajput	Currently owned by a Bania(trader)
3	Chanwar Palkiwalon Ki Haveli	16 <sup>th</sup> century	John Singh { Current Owner}	-	Single Court	Rajput	Got the UNESCO Award for Conservation
4.	Ranchordasji ki Haveli	16 <sup>th</sup> century	Brahmin	-	Single Court	Rajput	In Ruins

Dausa

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Brahmnnon Ki Haveli	-	Brahmin	Caste	Single Court	Rajput	In Ruins
2.	Choudriyon Ki Haveli	-	Hindu Trader	Caste	Single Court	Rajput	
3.	Chokrayaton Ki Haveli	18 <sup>th</sup> century	Hindu Trader	Caste	Double Court	Marwari	



S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S HISTORY AND CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Bhatt Rajaji Ki Haveli	1730 A.D.	Rajpurohit	Fraternal	Marwari	Rajput	
2.	Bissau House	1789 A.D.	Bissau Thakur	Single Family	No Court	Rajput	
3.	Chaumoo Haveli	1728 A.D.	Chaumoo Thakur	Single Family	Rajput	Rajput	
4.	Chaumoo House	20 <sup>th</sup> Century	Chaumoo Thakur	Single Family	Bungalow No Court.	Rajput	Darogaji's temple in front
5.	Hasukhlal Kasiwal Haveli	1720 A.D.	Rajpurohit	Caste	Marwar Symmetric	Marwari	
6.	Haveli -Shri Lal Chand Saraf.		Residential use Hindu Trader	-	Garden Haveli	Marwari	Located in Ghat ki Guni area
7.	Kothari Haveli	1750-1800 A.D.	Hindu Trader	Caste	Double Court	Marwari	
8.	Noonkaran Natani Haveli		Nagarseth	Fraternal	Marwari	Marwari	
9.	Nawab ki Haveli	1835-1880 19 <sup>th</sup> Century	Muslim Minister (Prime Minister to Ram Singh).	Single Family	Mult Court Rajput	Rajput	
10.	Nayalawalon ki Haveli. Moti Doongri Road	Late 19 <sup>th</sup> Century	Residence +School Nayla Thakur	Single Family	Mult Court	Rajput	Haveli complex (outside the walled city)
11.	Pundrik ji ki Haveli	Early 18 <sup>th</sup> Century	Guest house + Archeology office Rajpurohit { Brahmin} (maratha tantrik)	Caste	Rajput Double Court	Rajput	Guru of Man Singh. Protected monument. Wall paintings on first floor. Story of Nahar Singh Bhomia (demi-god) temple.
12.	Samode Haveli, Jaipur		Samode Thakur	Single Family	Rajput	Rajput	Heritage hotel.
13.	Samratji ki Haveli Bramhapuri	Early 18 <sup>th</sup> Century	Brahmin	Caste	Double Court	Rajput	Guru of Man Singh. Constructed before Jaipur.



**Samode**

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Dhabhai Haveli	17 <sup>th</sup> Century	Dhabhai, serving as minister to the Thakur	Fraternal	Rajput	Rajput	
2.	Shah Haveli	1800- 1850 A.D.	Hindu Trader	Caste	Marwari	Marwari	

**Sanganer and Shahpura**

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Babaji's Haveli	18 <sup>th</sup> century	Dadupanthis as religious advisors to the rulers	Religious	Rajput	Rajput	
2.	Hanumant Niwas	Late 19 <sup>th</sup> Century	Rajput Thakur	Single Family	Bungalow	Bungalow	

**GODWAD REGION****Pali and Sirohi**

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Gosai Haveli	17 <sup>th</sup> century	Brahmin	Caste	Marwari	-	
2.	Goram Haveli	17 <sup>th</sup> century	Brahmin	Caste	Marwari	-	
3.	Mamayon ki Haveli, Bheu	17 <sup>th</sup> century	Rajput descendants of royal family of Kishangarh	Single Family	-	-	
4.	Modi Haveli	Early 18 <sup>th</sup> Century	Hindu Trader	Single Family	Rajput	-	
5.	Singhion Ki Haveli	17 <sup>th</sup> century	Hindu Trader	Single Family	Marwari	-	
6.	Tilayatn Ki Haveli	16 <sup>th</sup> century	Rajpurohit	Caste	-	-	
7.	Ladhaji ki Haveli	1903-1914 A.D.	Hindu Trader	Caste	Double Court. Marwari	Marwari	



## HADOTI REGION

### Bundi

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Bhawani Singh ji ki Haveli Nahar ka chautta	17 <sup>th</sup> century	Currently used as school Royal Family Descendent/ Hindu Trader	Single Family	Rajput Asymmetric Multicourt	Rajput	5 storeys + basement
2.	Dhabai ji ki Haveli	-	Minister to Ruler	Caste	Single Court Rajput	Rajput	Locked
3.	Haveli Braj Bhushanji	Mid 19 <sup>th</sup> Century	Hotel		2 Court	Rajput	
4.	Haveli Meghawan ji ki, Balchandpara	Mid 18 <sup>th</sup> Century	Residence ,office and paying guest accomodation	Caste	1 Court Rajput	Rajput	A.V.- 3 Wall Paintings
5.	Suryamal Mishran ki Haveli	Early 19 <sup>th</sup> Century	Royal poet	-	Rajput Single Court	Rajput	INTACH

### Jhalawar

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Bohron Ki Haveli	1800-1850 A.D.	Hindu Trader	Single Family	Rajput Multicourt	Rajput	
2.	Chatra Bhavan	19 <sup>th</sup> century	Rajputl Descendent	Single Family	Rajput Single Court	Rajput	
3.	Jhala Haveli	1838 A.D.	Rajputl Descendent	Single Family	Rajput Single Court	Rajput	



**Jhalrapatan**

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Bapna Haveli	Early 19 <sup>th</sup> Century	Hindu Trader from Jaisalmer	Single Family	Marwari	Marwari	
2.	Chandwal Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	Marwari	Marwari	
3.	Manmal Saraf Haveli	1796 A.D.	Hindu Trader	Caste	Marwari	Marwari	
4	Ujjainwalonki Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	Single Court Marwari	Single Court Marwari	
5.	Vinodi Ram Balchand Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	Marwari	Marwari	

**Kota**

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Bade Devta ji ki Haveli (Raj purohits) Radha Bilas	1838 A.D.	Phone: 23527/22077 Brahmin Rajpurohit	Fraternal	Rajput	Rajput	Paintings in upper Room
2.	Bapna Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Single Family	Marwari Multicourt	-	
4.	Chabrawalon Ki Haveli	Mid 19 <sup>th</sup> Century	Hindu Trader	Caste	Marwari	Marwari	
5.	Chote Mathuradheesh Ki Haveli	Early 19 <sup>th</sup> Century	Brahmin/Temple	Religion	Rajput Multicourt	Rajput	
6.	Zalam Singh Jhala Haveli		Royal Descendent Jhalla	Single Family	Rajput Multicourt	Rajput	Structurally unsafe. Entry prohibited



# MARWAR REGION

## Jaisalmer

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Diwan Nathmal's Haveli,	1885 A.D.	Mammohanji Goidanji/residence Diwan{ Minister to Ruler}	Single Family	Single Court Marwari	Marwari	
2	Nachna Haveli	1810 A.D.	Nachna Thakur	Single family	Multicourt Rajput	Rajput	
3.	Patwon ki Haveli (5 havelis)	1800-1860 A.D.	Hindu Traders of Opium	Fraternal	Single Court Marwari	Marwari	Excels in stone carving
4	Salim Singh Haveli	1815 A.D.	Rajput Minister	Single Family	Multicourt Rajput	Marwari	Has a unique façade.
5	Suraj Kanaji Haveli, Hotel Suraj	1463 A.D.	Rajpurohit	Caste	Single Court Rajput	Rajput	

## Jodhpur

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Asop Thakur	1627 A.D.	Residential complex and temple	-	-	-	INTACH listing
2.	Bade Miya Ki Haveli	1843 - 95A.D.	Muslim Minister to the Jodhpur Ruler	Single Family	Multicourt Rajput	Rajput	
3.	Hathiram Ki Haveli	17 <sup>th</sup> century	Rajpurohit	Caste	Double court	Marwari	
4.	Mathuron Ki Haveli	17 <sup>th</sup> century	Patta Naveez for the Ruler	Single Family	Multicourt Rajput	Marwari	
5.	Pal Thakur ki Haveli	1800 A.D.	Rajput Thakur	Single Family	Multicourt Rajput	Rajput	
6.	Pokhran House	19 <sup>th</sup> century	Pokhran Thakur	Single Family	Bungalow	Rajput	
7.	Rathor Haveli	1800 A.D.	Royal Descendent	Single Family	Bungalow	Marwari	



**Phalodi and Kheechan**

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Dhadha Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	-	Marwari	Locked
2.	Golcha Haveli,Kheechan	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	Bungalow	Marwari	Locked
3.	Motilala Amarchand Kochar Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	-	Marwari	Locked
4.	Sonani Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	-	Marwari	Locked

**Pokhran**

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Girdharilal Lakotia Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	-	Single Court Marwari	Marwari	Wood Carving on Ceiling
2.	Roshanlal Ki Haveli	Early 19 <sup>th</sup> Century	Hindu Trader	Caste	Single Court Marwari	Marwari	

**Sojat**

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Pannalal Jain Haveli	1800 A.D.	Hindu Trader	Caste	Single Court Marwari	Marwari	Wood Carving in ceiling of Back Rooms



MERWARA REGION

Ajmer

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Gajmal Loonia Haveli	19 <sup>th</sup> Century	Hindu Traders	Fraternal	Multicourt	Marwari	
2.	Haveli, Old Ghee Mandi, Sarogi Mohalla	1855 A.D.	Shri Bagchand Soni/ Hindu Traders	Fraternal	Multicourt	Marwari	Carved Columns
3.	Lodha Haveli	1850 A.D.	Shri Hamir Singh Lodha Shops on ground	Fraternal	Multicourt	Marwari	
4.	Mauzma Bad ki Haveli, Ajmer road 2-3 km. From Dudu	-	-	-	-	-	Birthplace of ManSingh I {In Ruins}
5.	Narsinghdas ji ki Haveli (Chaganlal Magan Trust)	1840-1850 A.D.	Kuchaman Family/ Marathas	Single Family	Double court	Maratha {Rajput}	
6.	Patwon Ki Haveli	1830-40A.D.	Hindu Traders from Jaisalmer	Fraternal	Multicourt	Marwari	

Kishangarh

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Bhagwan Das ji Maharaja Haveli	Late 17 <sup>th</sup> Century	Religious Advisors to Rulers	Religious	Multicourt Asymmetric	Rajput	
	Bhayati Bhawan, Katla Bazaar	1910 A.D.	Hindu Traders	Caste	Single Court	-	8
2.	Diwan ji ki Haveli,(4 in no.) Diwan ji ka Mohalla	17 <sup>th</sup> Century	Rajput minister {Diwan} to the Ruler.	Fraternal	Multicourt Asymmetric	Rajput	Used as Painting School for Banithani Paintings.
3.	Deputy ji ki Haveli	-	Vacated	-	-	Rajput	Locked
4	Lodha family haveli	18 <sup>th</sup> Century	Hindu Traders	-	Double court	Marwari	
5.	Mir Saab ki Haveli	18 <sup>th</sup> Century	Muslim Hakim	Single Family	Multicourt	Rajput	
6.	Mehtan Haveli	1600 A.D.	Hindu Traders	Single Family	Multicourt	Rajput	
7.	Rajguru Haveli	1600 A.D.	Rajjyotish	-	Single court	Rajput	



**Pushkar**

S.N o	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Agarwal Temple	19 <sup>th</sup> Century	Hindu Traders	-	Temple Haveli	Marwari	
2.	Bohra Temple	19 <sup>th</sup> Century	Hindu Traders	-	Temple Haveli	Marwari	
3	Govind Bhawan, Bari Basti	Mid 19 <sup>th</sup> Century	Shri Uday Krishna Sharma (Bought from Sadhu Family)	-	Single Court	Rajput	
4	Kumawat Bhawan, Bari Basti	Mid 19 <sup>th</sup> Century	Kumawat {Builders} Family/Residence	-	Single Court Rajput	Rajput	
5	Ras Bihar Temple	18 <sup>th</sup> Century	Rajput Rulers. Donated by Rajputs	-	Temple Haveli	Rajput	

**Nagaur**

S. No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1	Bawan Maeya Haveli	-	Marwari	Caste	Single Court	Marwari	

**MEWAR REGION****Bassi and Begun**

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S HISTORY AND CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT FEATURES AND REMARKS
1.	Ashkaran Ki Haveli, Begun	16 <sup>th</sup> Century	Royal Family of Rajputs	In Fort Complex	Multi Court Rajput	Rajput	
2.	Anupurna Haveli, Begun	17 <sup>th</sup> Century	Brhamin	Caste	-	-	In Ruins
3.	Haveli near Palace,Bassi	18 <sup>th</sup> century	Rajput	-	Single Court	Rajput	



## Nimbahera

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1	Naro ki Haveli	1833 A.D.	Naral brothers,Hindu Traders	Fraternal	Multicourt	Marwari	
2	Sharda ki Haveli ,	19 <sup>th</sup> century	Numal and Girdharimal Hindu traders	Single Family	Single Court	Marwari	

## Salumbher

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Bhandari Haveli	1600 A.D.	Caretakers of Royal Stores	Caste	Single Court	Rajput	
2.	Vardiya Haveli	1750 A.D	Hindu Traders	Caste	Single Court	Rajput	

## Udaipur

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1	Amet Haveli	1680A.D.	Rajput Thakur of Amet	Single Family	Multicourt Rajput	Rajput	
2	Bagore ki Haveli	1773-78 A.D.	Belonged to Prime Minister of Rana Pratap	Single Family	Multicourt	Rajput	Now under P.W.D.
3	Bohera Haveli	18 <sup>th</sup> Century	Bohera Thakur	Single Family	Multicourt	Rajput	
4	Chatur Haveli	1750 A.D.	Hindu Traders	Caste	Double Court	Rajput	
5	Dhabai ji ki Haveli	1610 A.D.	Shri Lakshmansingh ji Dhabai {Royal Nurses}	Caste	Double Court	Rajput	Sheesh Mahal and Rang Mahal
6	Jeewan Niwas	1918 A.D.	Rajput, Private Secretary	Single Family	Single Court	Rajput	
7	Kothari ji ki Haveli	17 <sup>th</sup> Century	Earlier belonging to Nagarseth Bapna family of Udaipur Kothari family	Fraternal	Multi Court	Rajput	
8	Mamayon Ki Haveli	1685 A.D.	Rajputs Mfinister to King	Single Family	Double Court	Rajput	Earlier belonged to Bagor Thakur
9	Mehta Haveli	18 <sup>th</sup> Century	Hindu Traders	Caste	Double Court	Rajput	
10	Paliwal Haveli,	17 <sup>th</sup> Century	Rajpurohits	Caste	Double Court	Rajput	Refer Sunand Prasad {1987}
11	Punjawat Bhavan	18 <sup>th</sup> Century	Hindu Traders	Caste	Double Court	Rajput	
12	Purohit ji ki Haveli	1770 A.D.	Purohit family	Single Family	MultiCourt	Rajput	



# MEWAT BRIJ REGION

## Alwar

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Borja House,	17 <sup>th</sup> -18 <sup>th</sup> century	Rajput Minister	Single Family	Double Court	Marwari	
2	Daga Bhavan	19 <sup>th</sup> century	Daga Brothers {Rajput}	Single Family	Bungalow Type	Marwari	
3.	Dhabhai Haveli	19 <sup>th</sup> century	Ministers	-	Double Court	Rajput	
4.	Diwan ji ki Haveli	1775-1800	Shri Hazari Lal Marwari Minister	Caste	Single Court	Marwari	
5	JhajKhan ki Haveli,	17 <sup>th</sup> -18 <sup>th</sup> century	Shri JhajSahib Jagirdar/ Rajput Minister	Single Family	Double Court	Marwari {Post Jaipur}	
6	Khurrewali Haveli	1850 A.D.	Rajput Minister	Fraternal	Double Court	Rajput	
7	Pop Singh Ki Haveli	19 <sup>th</sup> century	Rajput Minister	Caste	Single Court	Rajput	
8	Raj Purohit ki Haveli	1800-1850	Pandit Roop Naraian	Caste	Single Court	Marwari	
9	Laxmi House	1850-1900	Shri LaxmiNath Khandelwal Hindu Trader family as Minister to the King	Single Family	Double Court	Marwari	

## Rajgarh

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S HISTORY AND CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Dadupanth Mahant Ki Haveli	18 <sup>th</sup> century	Religious Advisors of Ruler - Dadupanthi	Religious	Multicourt	Rajput	



# Sawai Madhopur

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Haveli, Shrangi ji ki, Ranthambore	11 <sup>th</sup> century		-	-	-	Archaeological Survey of India
2.	Mehta Singh ki Haveli	18 <sup>th</sup> Century		Single Family	Double Court	Rajput	
3.	Nagar Seth Ki Haveli	1800 A.D.	Nagarseth	Fraternal	Multicourt	Marwari	

## Tijara

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Agarwal Haveli	18 <sup>th</sup> Century	Hindu Traders {Marwari}	Caste	Single Court	Marwari	

## Tonk

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Agarwal Haveli	1840 A.D.	Hindu Traders	Caste	Single Court	Marwari	
2.	Ahmed yaar Khan Haveli	1840	Muslim Minister	Single Family	Multicourt	Rajput	
3.	Gol Haveli	1846	Muslim Minister Mehmud Khan (brother of Ahmed yaar)	Single Family	Multicourt Asymmetric	Rajput	water spout, belgium mirror in blue painted room
4.	Mahmud Khan ki haveli	Late 18 <sup>th</sup> Century	Muslim Minister (Commander in chief of Amir Khan)	Single Family	Multicourt	Rajput	Astronomical figures, 2 Masjids in zenankhana, 2 wells. in basement
5.	Mathurawalon Ki Haveli	1840 A.D.	Hindu Traders	Caste	Double Court Marwari	Marwari	
6.	Ratlam walon ki Haveli	Late 17 <sup>th</sup> Century {Before 1700}	Currently run as School. (Treasurer of Amir Khan)	Caste	Single Court	Rajput	Photographs



SHEKHAWATI REGION

Churu

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Bagla Haveli		Marwari { Hindu Traders }	Caste	Single Court	Marwari	Single court
2.	Baid Haveli	1900-20	Marwari { Hindu Traders }			Marwari	
3.	Kothari Haveli	1870	Marwari { Hindu Traders }	Caste	Double Court	Marwari	
4.	Navrattan Banthia Haveli	1850	Marwari { Hindu Traders }	Caste	Single Court	Marwari	
5.	Surana Double Haveli	1870	Marwari { Hindu Traders }	Fraternal	MultiCourt {3}	Marwari	

Fatehpur

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Bavan Tibari Haveli	1840	Ganeriwala Family	Fraternal	Double Court	Marwari	
2.	Bhartia Haveli	1925	Marwari { Hindu Traders }	Caste	Double Court	Marwari	
3.	Goenka Haveli	1855	Marwari { Hindu Traders }			Marwari	
4.	Lal Patthar Haveli	1820 A.D.	Marwari { Hindu Traders }	Caste		Marwari	Locked
5.	Mahavir Prasad Goenka Haveli,	1850 A.D.	Marwari { Hindu Traders }	Caste	Single Court	Marwari	Ref. Sarah Tillotson

Jhunjhunu

S.No	NAME /ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Nurudin Farooq Haveli	19 <sup>th</sup> Century	Marwari { Hindu Traders }	Single Family	Double Court	Muslim Style	
2.	Six Haveli Complex	19 <sup>th</sup> Century	Marwari { Hindu Traders }	Fraternal	MultiCourt {7}	Marwari	
3.	Tibrewala Haveli	1883 A.D.	Marwari { Hindu Traders }				
4.	Tulsian Haveli	1843	Marwari { Hindu Traders }	Caste	Single Court	Marwari	



### Lakshmangarh

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Badridas Vaid Haveli	1890 A.D.	Marwari { Hindu Traders }			Marwari	
2.	Char Chowk Haveli	1840 A.D.	Marwari { Hindu Traders }	Fraternal	MultiCourt { 4 Courts +Naal }	Marwari	
3.	Jajoda Haveli	1902 A.D.	Marwari { Hindu Traders }	Caste	Single Court	Marwari	
4.	Kesardev Saraf Haveli	1880 A.D.	Marwari { Hindu Traders }			Marwari	
5.	Sikaria Haveli	1890A.D.	Marwari { Hindu Traders }	Caste	Single Court	Marwari	

### Mandawa

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Aakhramka Haveli	1880	Hindu Traders			Marwari	
2.	Bansidhar Newatia Haveli	1910	Hindu Traders			Marwari	
3.	Chokhani Double Haveli	1910 A.D.	Hindu Traders	Fraternal	Multi Court {3}	Marwari	
4.	Debraj Tormal Bhudramal Goenka Haveli	1898	Hindu Traders			Marwari	
5.	Goenka Double Haveli	Late 19 <sup>th</sup> Century	Goenkas { Hindu Traders }	Fraternal	Multi Court {3}	Marwari	Ramayan panel painted on North Wall.
6.	Gulab Rai Ladia Haveli	1870	Hindu Traders			Marwari	
7.	Saraf Haveli	1876	Hindu Traders	Caste	Double Court	Marwari	



### Nawal garh

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Aath Haveli	1910 A.D.	Marwari { Hindu Traders }	Fraternal	MultiCourt {9 Courts}	Marwari	
2.	Bansidhar Bhaghat Haveli	1880 A.D.	Marwari { Hindu Traders }	Caste	Double Court	Marwari	
3.	Chokhani Haveli	1900 A.D.	Marwari { Hindu Traders }			Marwari	
4.	Dungaich Haveli	1855 A.D.	Marwari { Hindu Traders }	Caste		Marwari	
5.	Goenka Four Haveli	1905 A.D.	Marwari { Hindu Traders }	Fraternal	MultiCourt {5}	Marwari	Four Haveli complex
6.	Kulwal Haveli	1905 A.D.	Marwari { Hindu Traders }	Caste	Double Court Bungalow Type	Marwari	
7.	Murakah House, Nawalgarh	1920 A.D.	Marwari { Hindu Traders }	Caste	Double Court	Marwari	Ref. Sarah Tillotson
8.	Poddar Haveli	1920 A.D.	Marwari { Hindu Traders }	Caste	Double Court	Marwari	Double court
9.	Ram Kumar Sri Niwas Jangia	1922 A.D.	Marwari { Hindu Traders }			Marwari	

### Sikar

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S HISTORY AND CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Biyani Haveli	1900-25A.D.	Marwari { Hindu Traders }	Caste	Single Court	Marwari	
2.	Chitlangiyon ki Haveli	1910 A.D.	Marwari { Hindu Traders }	Caste	Single Court	Marwari	
3.	Jeevan Ram Biyani Haveli	1870 A.D.	Marwari { Hindu Traders }	Caste	Single Court Symmetric	Marwari	



VAGAD REGION

Dungarpur

S.No	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Bhinda Ki Haveli	18 <sup>th</sup> century	Thakur of Bhinda	Single Family	Single Court	Rajput	
2.	Ghugha Haveli	1700 A.D.	Rajput Thakur of Ghugha	Single Family	Single Court	Rajput	
3.	Nawal Shah Haveli	18 <sup>th</sup> century	Rajput			Rajput	

Banswara

S.N o	NAME / ADDRESS OF HAVELI	AGE	OWNER 'S CASTE	CLUSTER TYPE	PLAN TYPE	FAÇADE TYPE	SIGNIFICANT REMARKS
1.	Kothari Haveli 1	Early 18 <sup>th</sup> Century	Hindu Trader (later Minister to the King)	-	Multicourt	Marwari	
2.	Kothari Haveli 2	18 <sup>th</sup> Century	Hindu Trader		Single Court	Marwari	



**Appendix–B - Maps of Towns Covered in Fieldwork**  
(Compiled from the Town Planning Department, Jaipur and Previous research work)



# **TEXT BOUND INTO THE SPINE**



TOWNS

DAUSA

AMBER

JAIPUR

SANGANER

SAMODE

SETTLEMENT  
TYPE

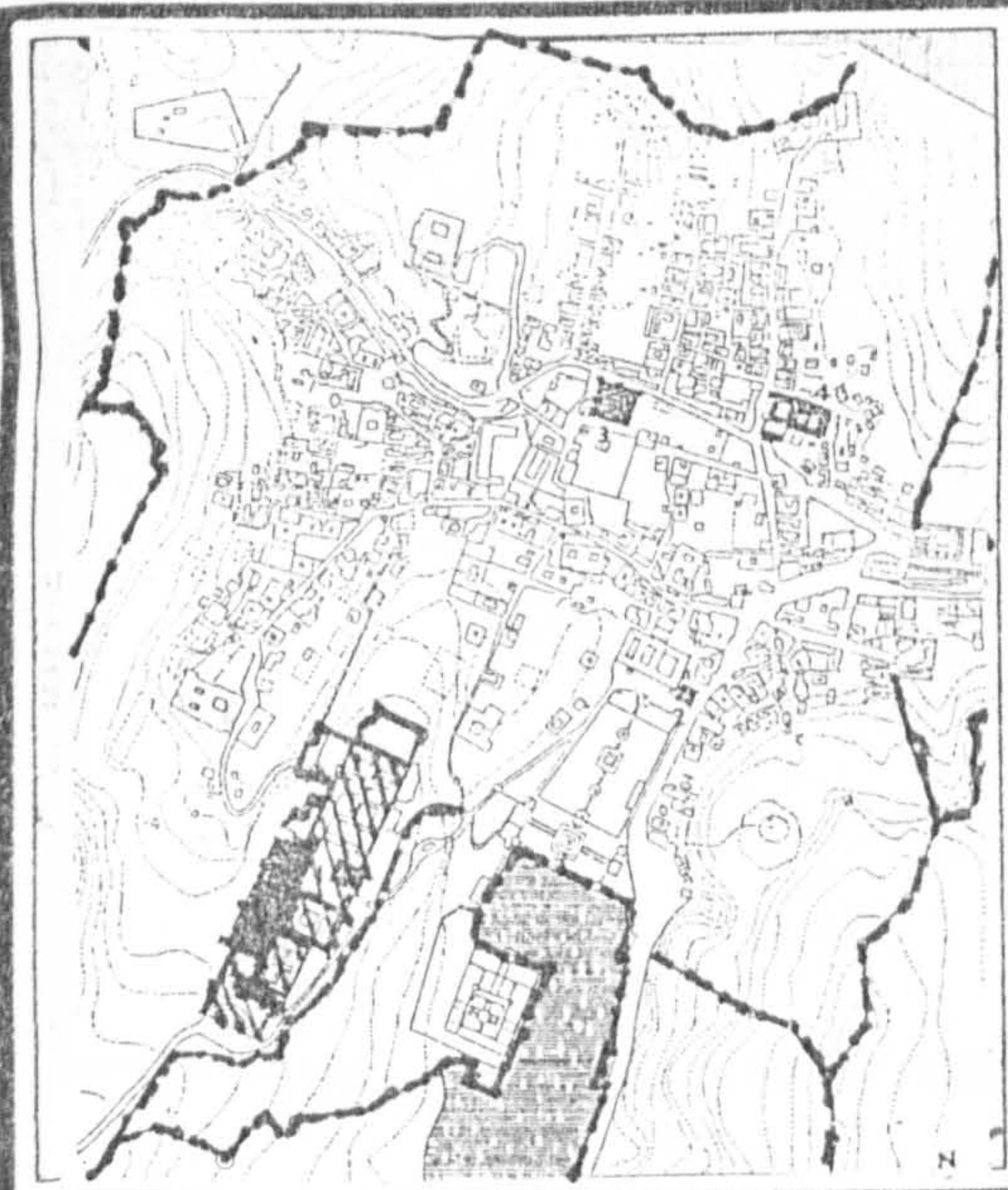
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MERCANTILE

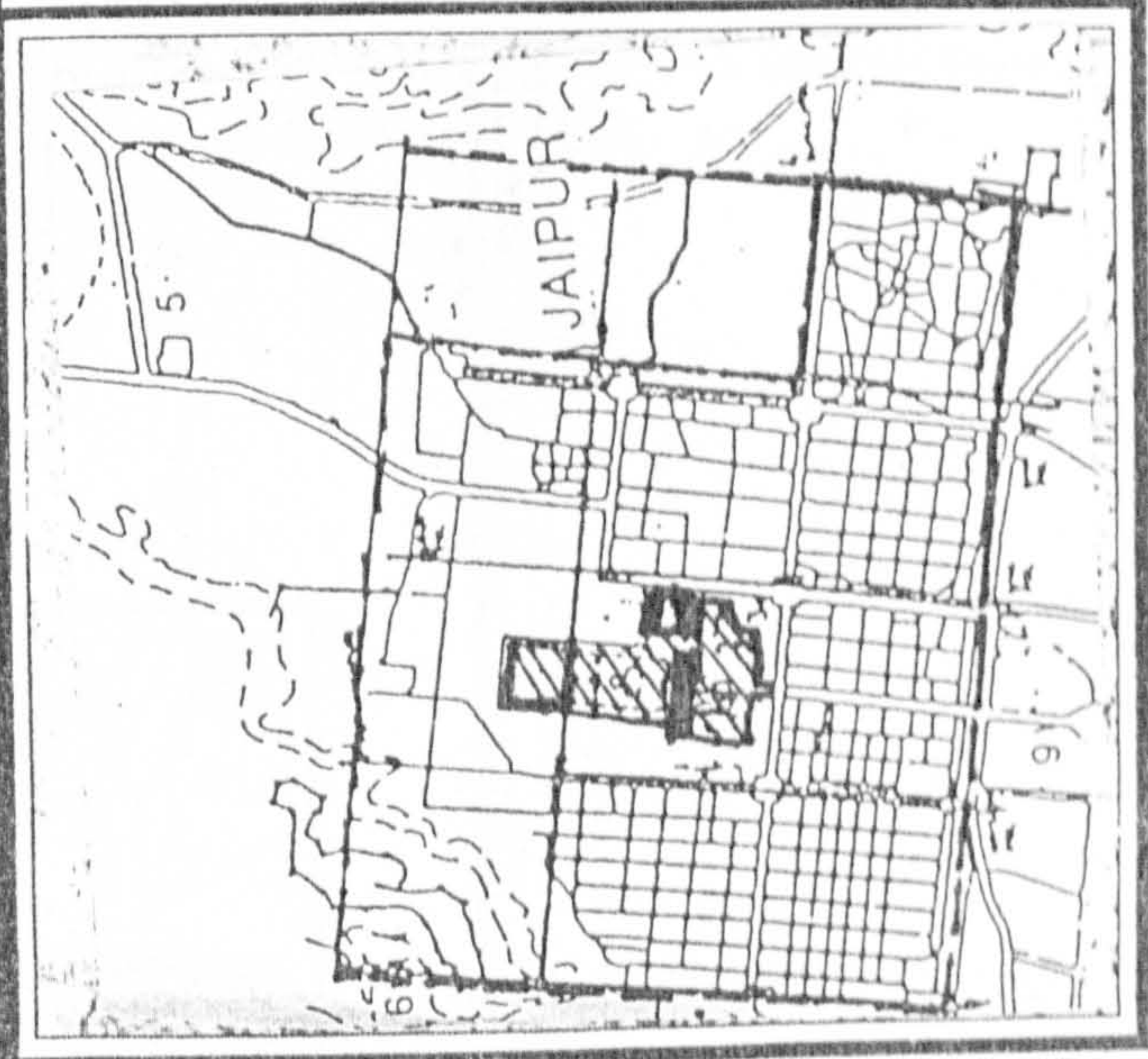
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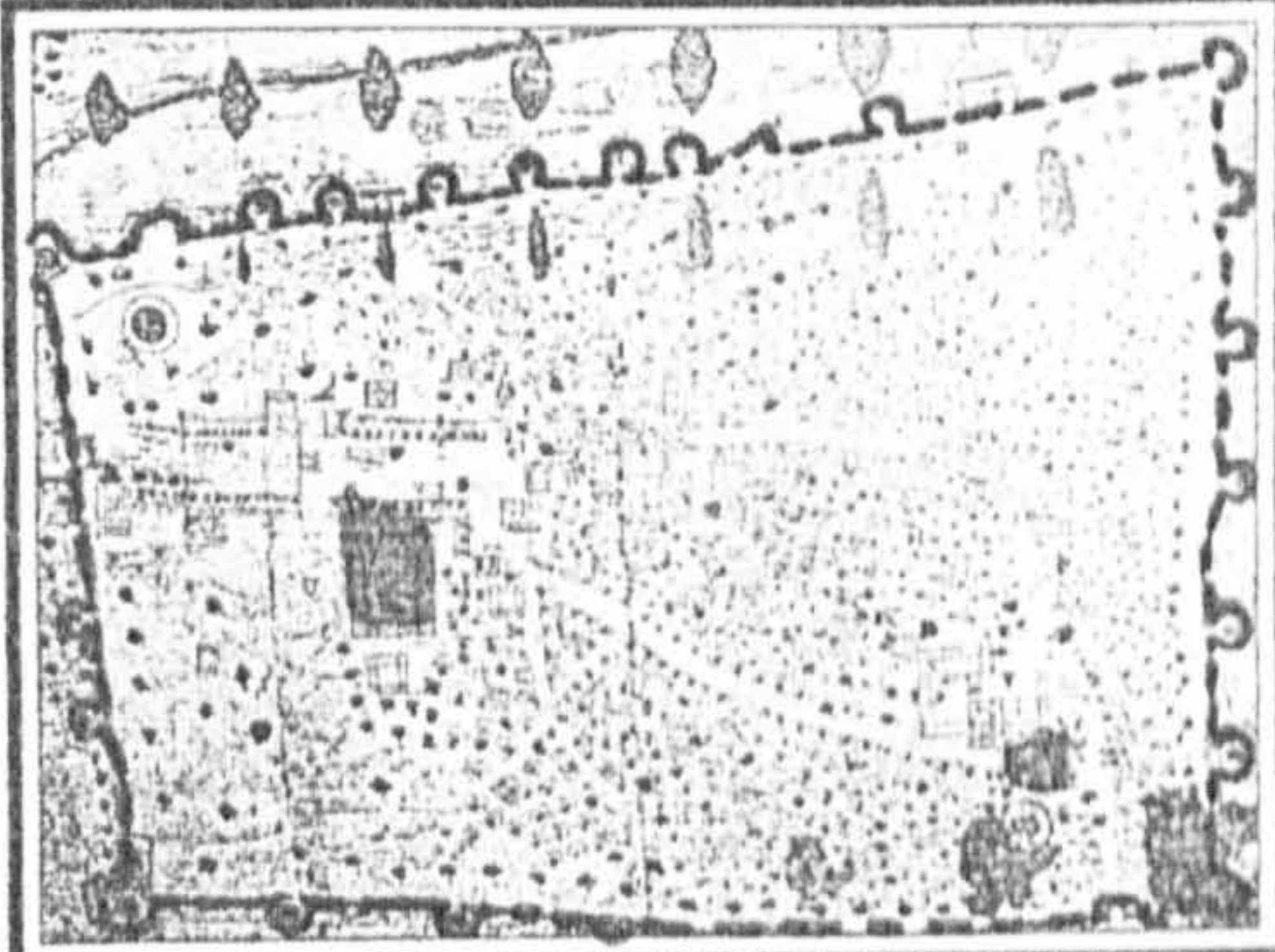
Dausa, 10th century



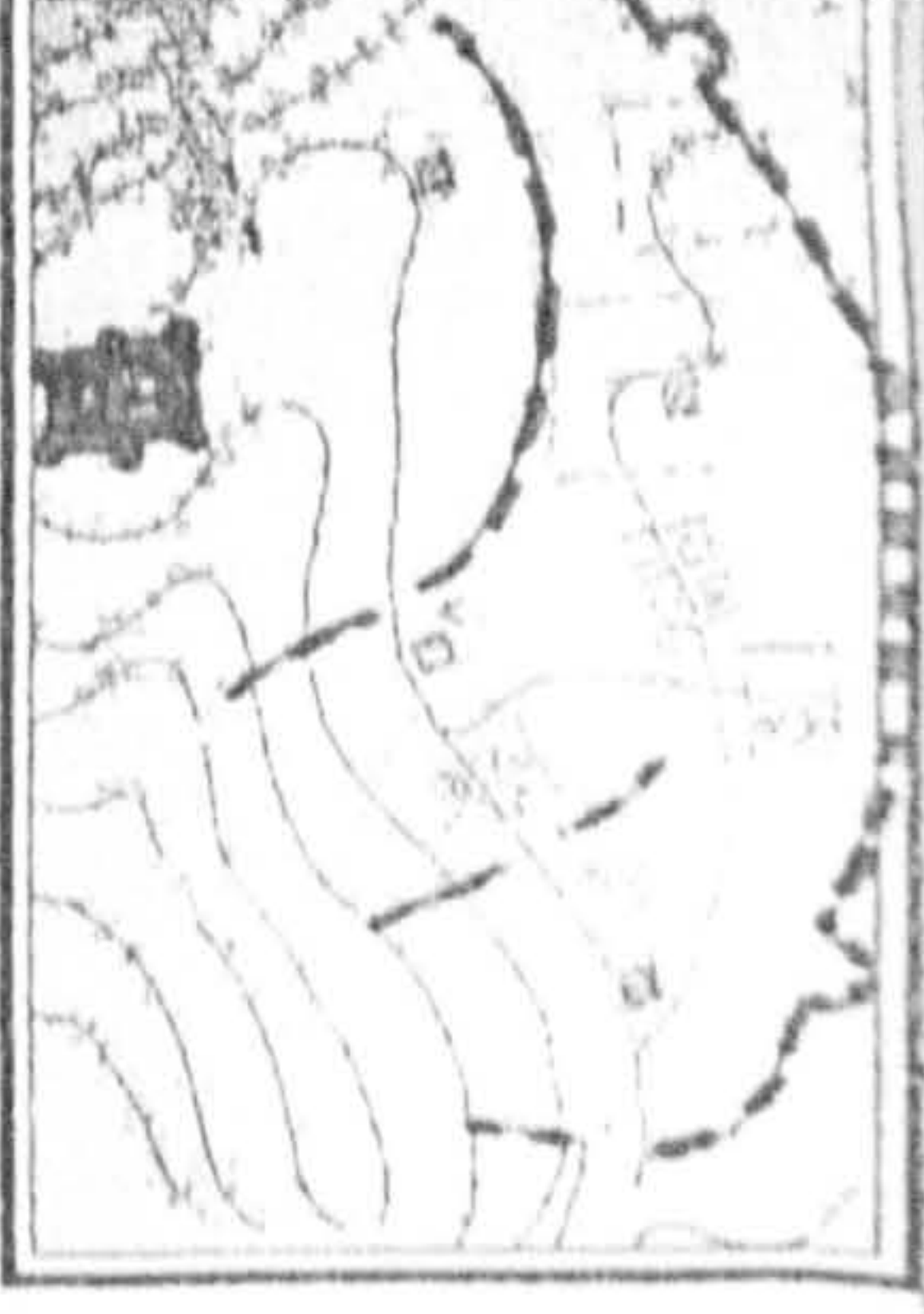
Amber, 1037 A.D.



Jaipur, 1728 A.D.



Sanganer, Late 18th century



Samode



SETTLEMENT  
TYPE

Bundi, 1241 A.D.

Kota, 1625 A.D.

N

N

MILITARY

Jhalawar

Jhalrapatan

MERCANTILE

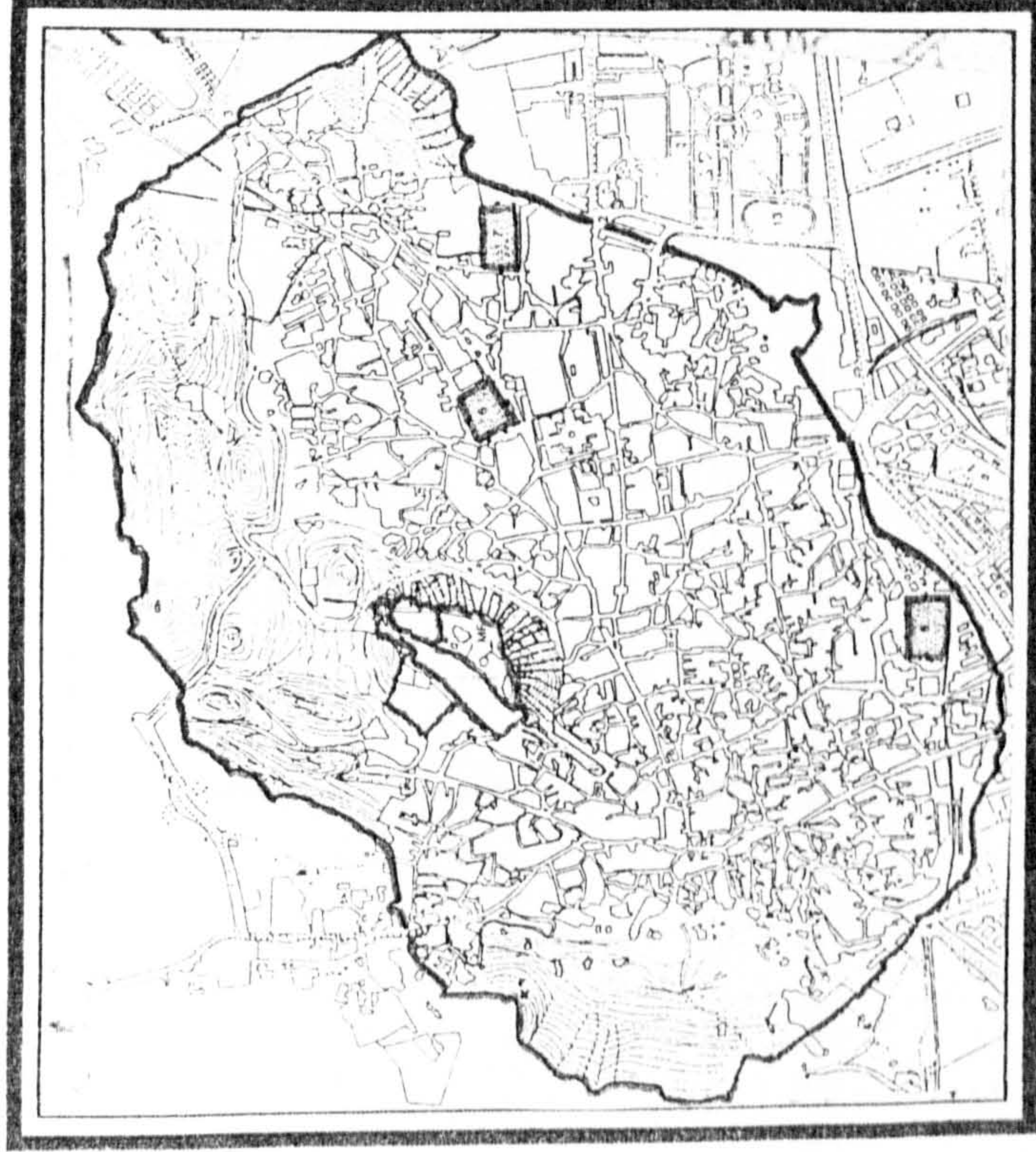
B-3



SETTLEMENT  
TYPE

MILITARY

MERCANTILE



Jodhpur, 1459 A.D.



Jaisalmer, 1156 A.D.



Bikaner, 1486 A.D.



AJMER

PUSHKAR

TOWNS KISHANGARH

SETTLEMENT  
TYPE

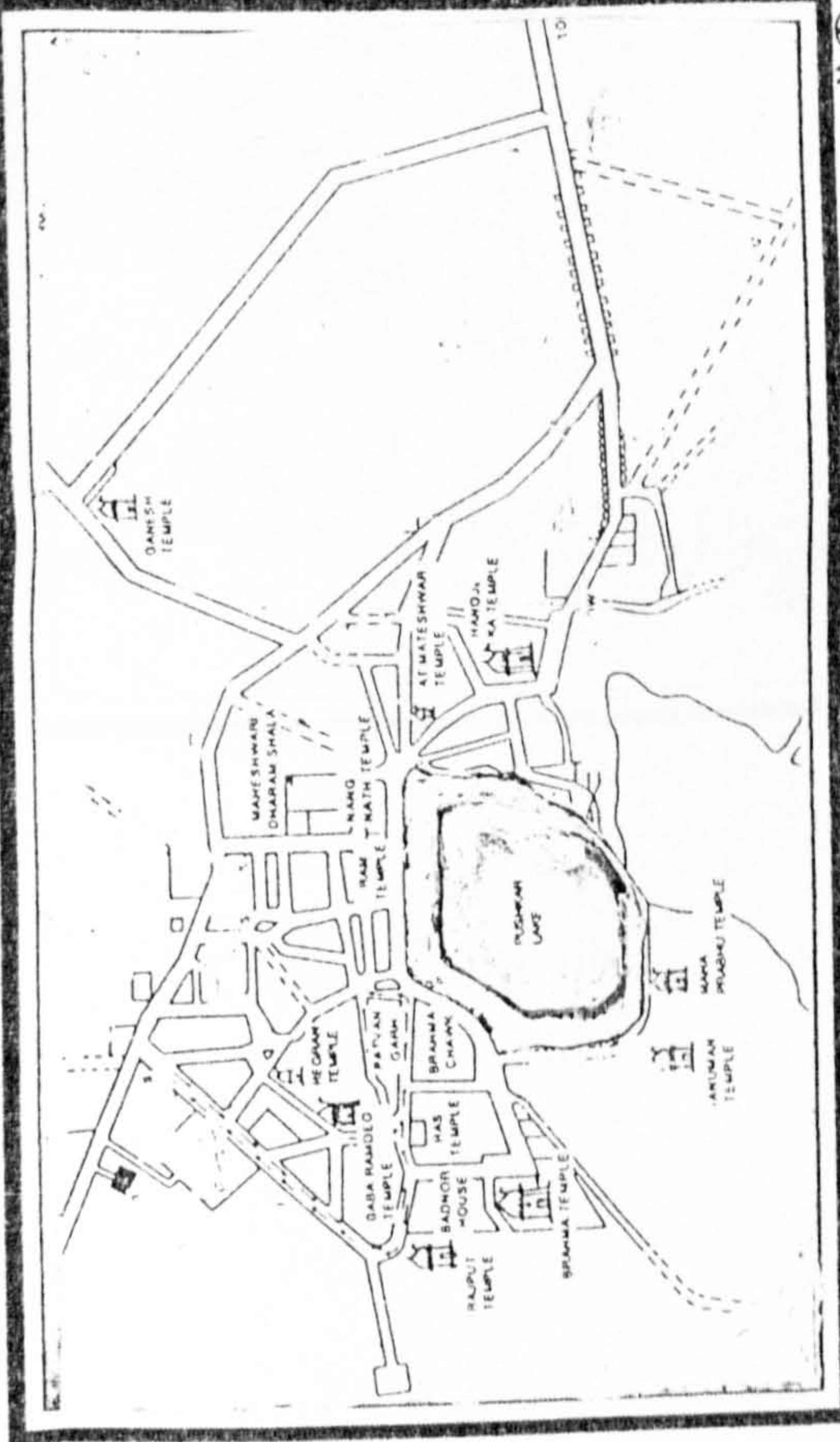
RELIGIOUS

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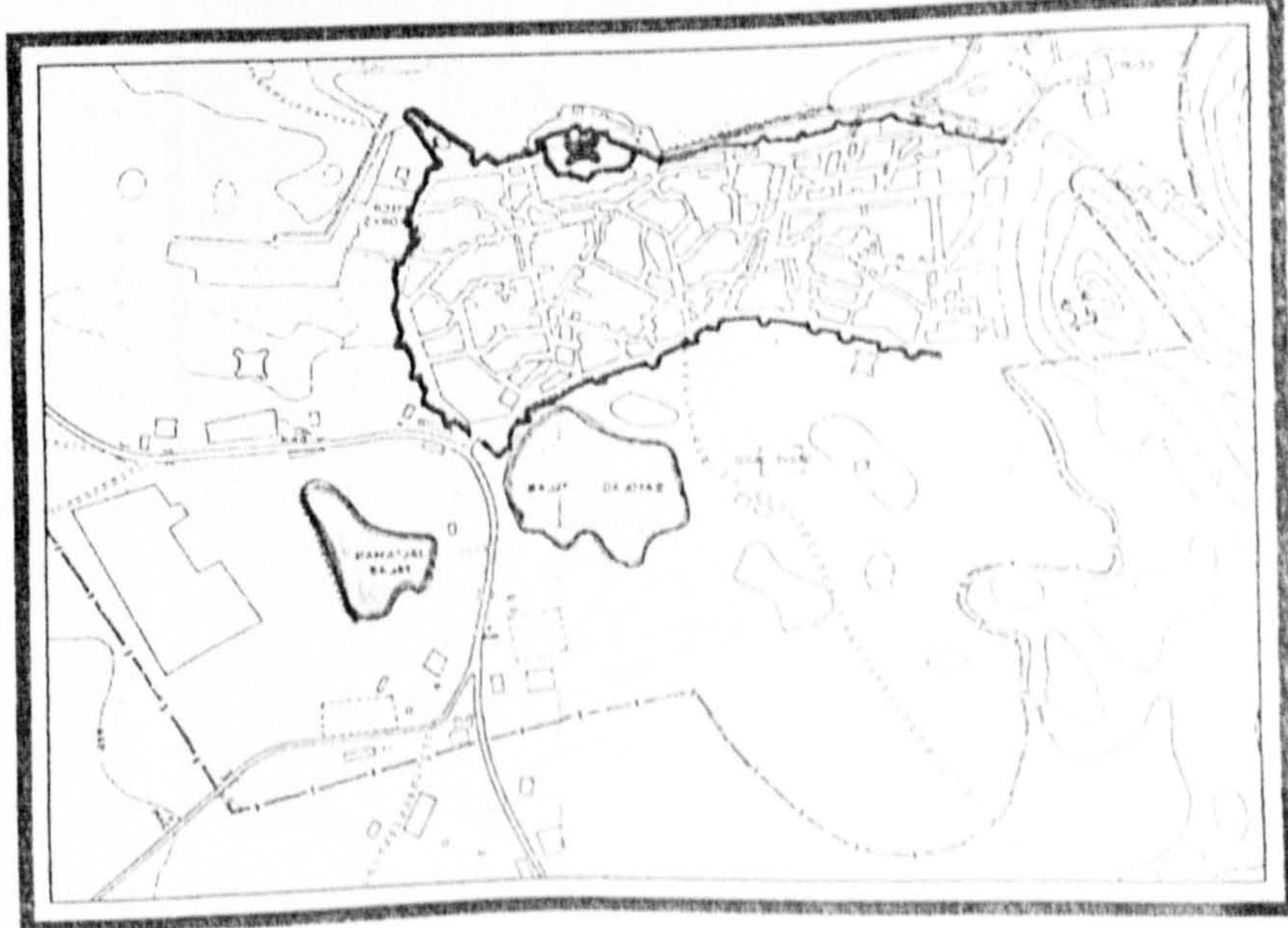
B-5



Ajmer, 13th century



Pushkar, (?)



Kishangarh, 11th century+



TOWNS

NATHDWARA

SALUMBHER

SETTLEMENT  
TYPE

RELIGIOUS

MILITARY  
B-6



Nathdwara, 17th century



Udaipur, 16th century



Salumbher, 16th c.

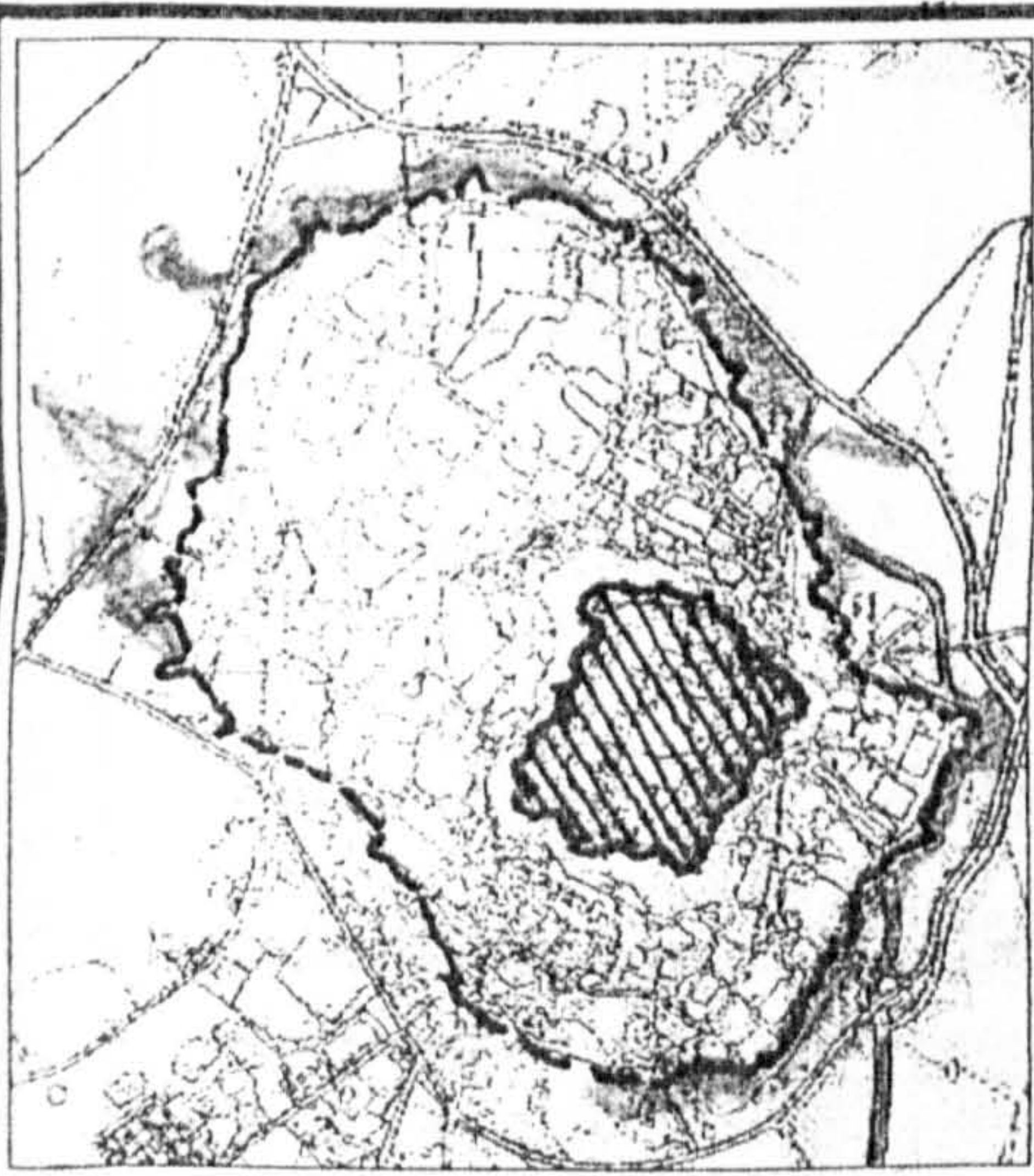


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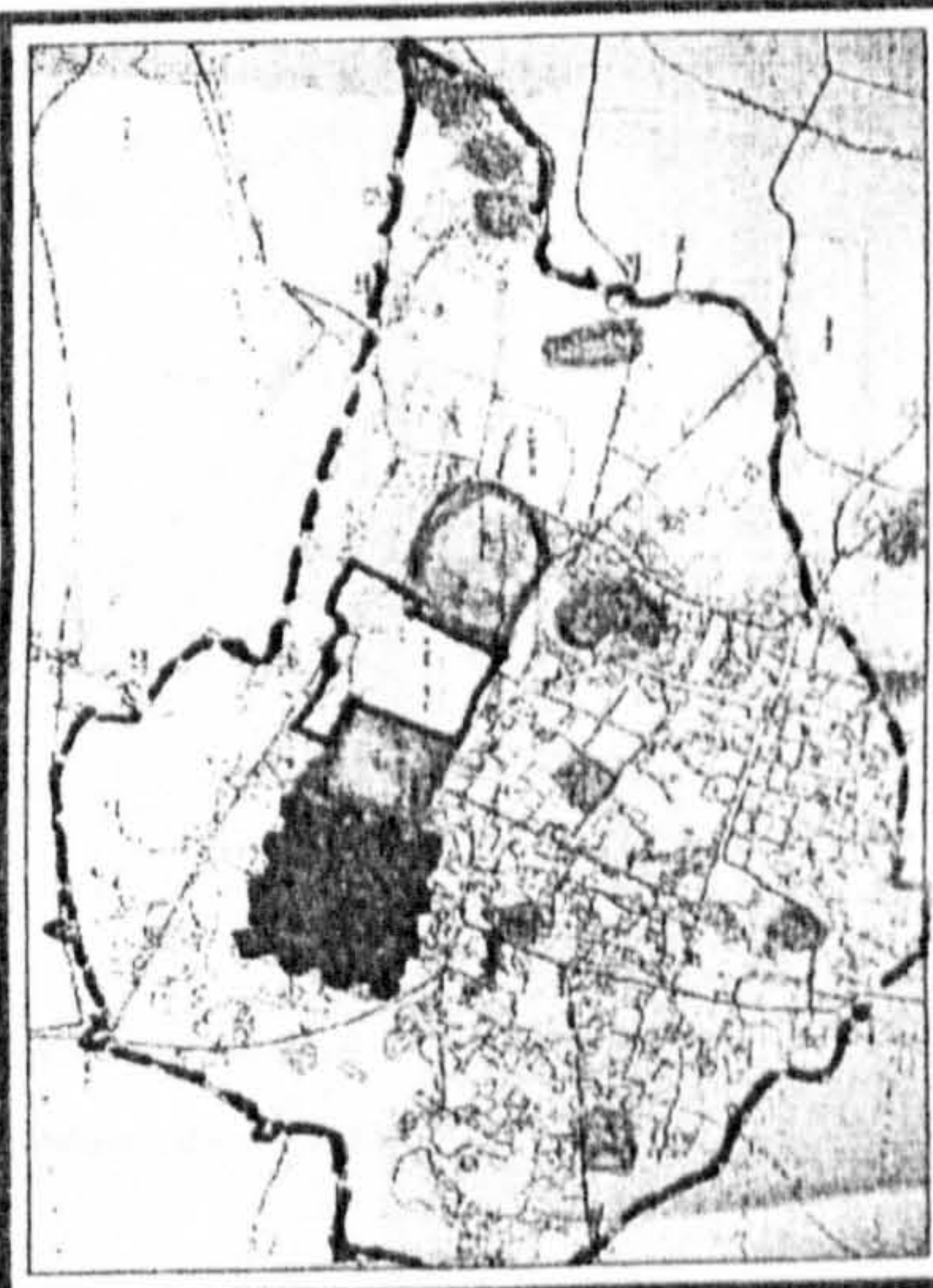


Alwar, 1771 A.D.

MILITARY

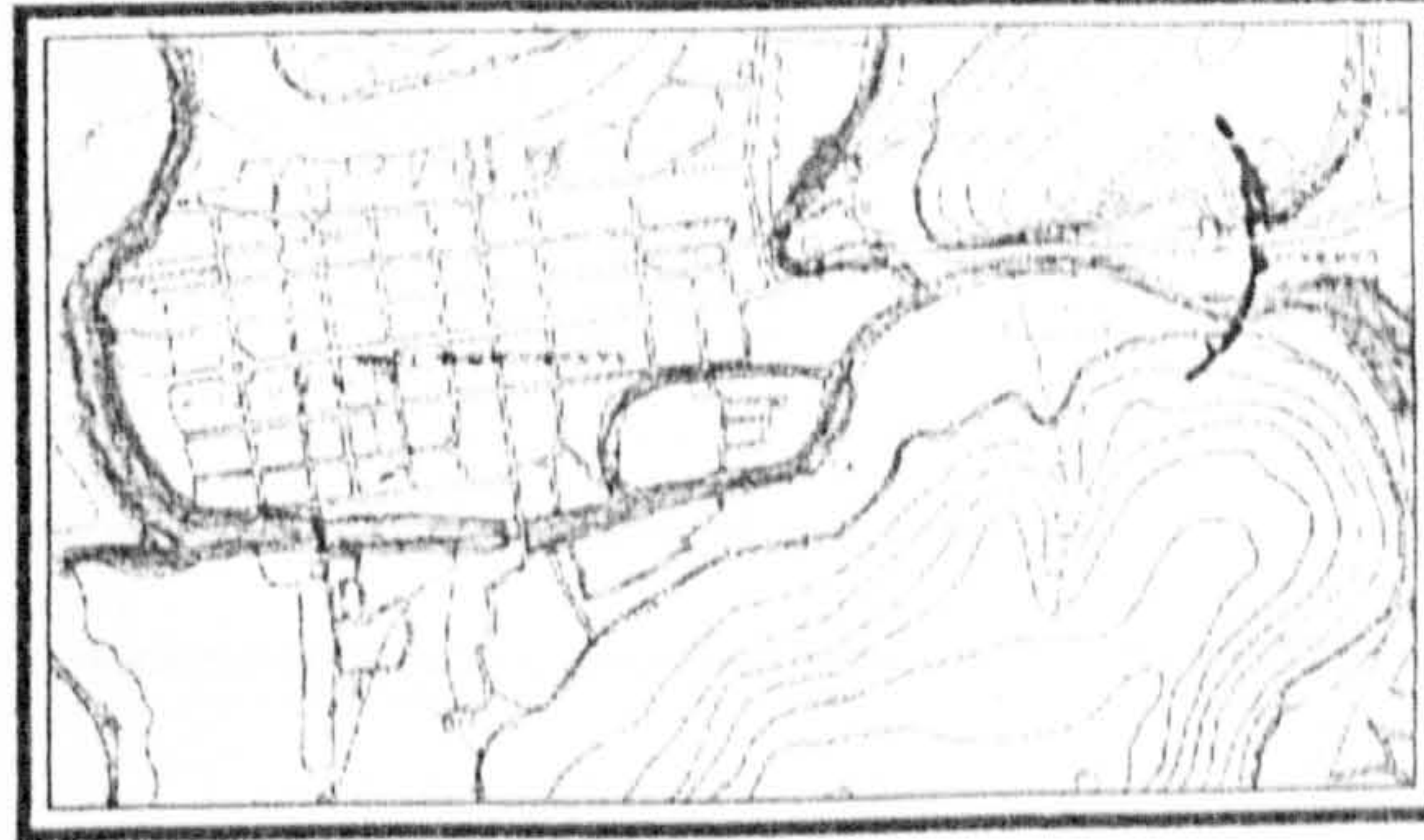


Bharatpur,



Deeg, 1730 A.D.

AGRARIAN



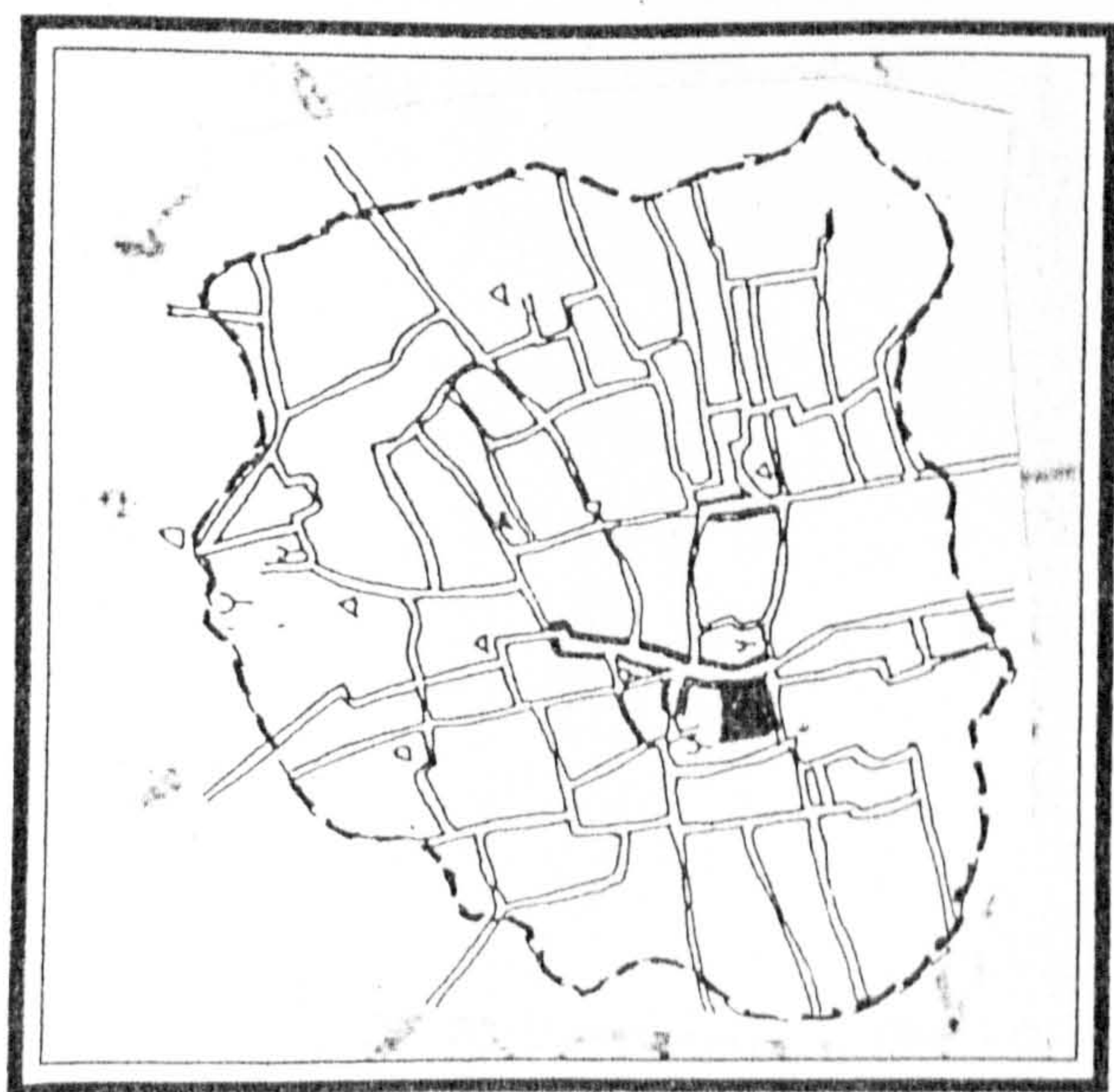
Sawaimadhupur, 18th century



Tonk, 1643 A.D.

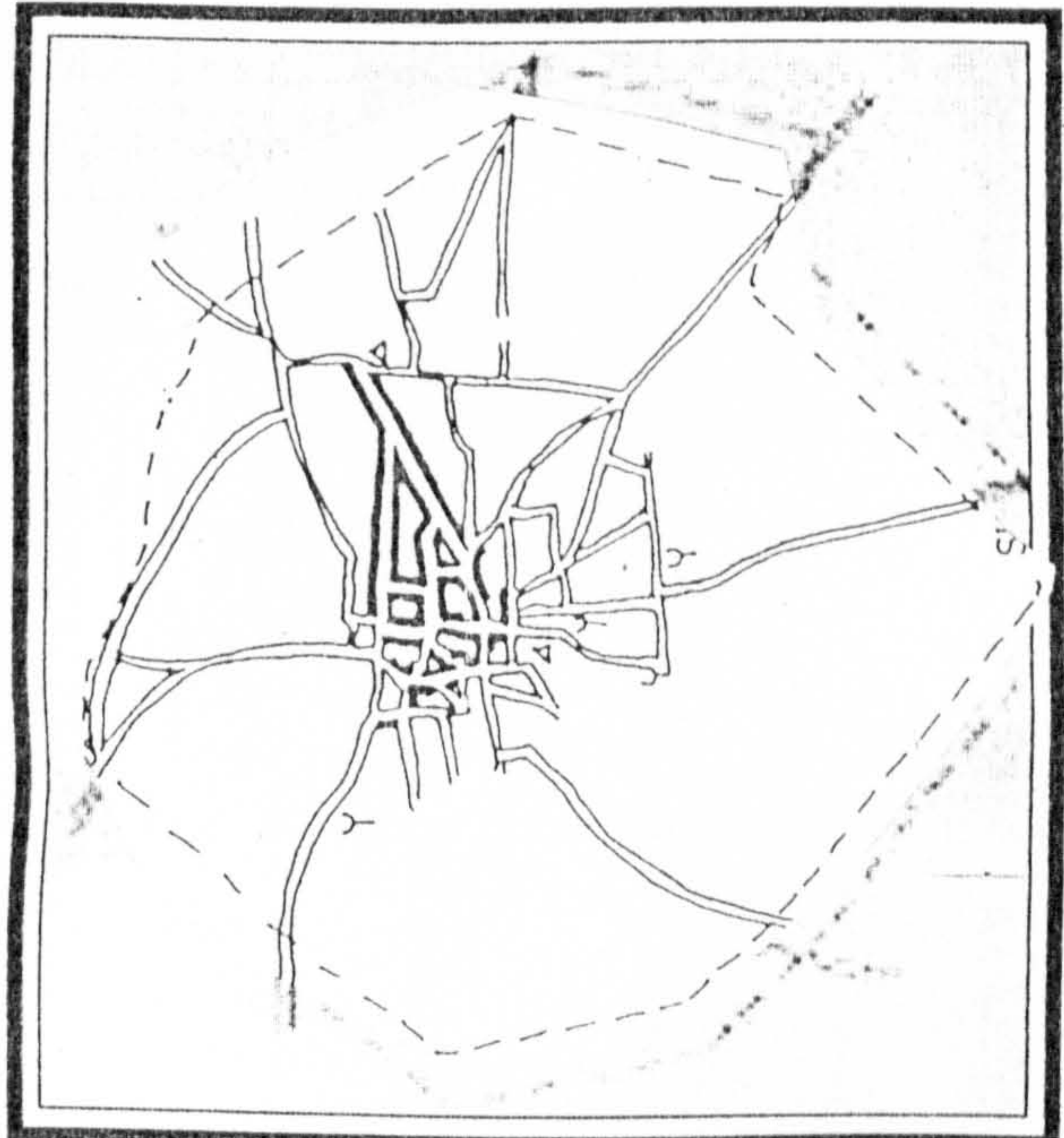


SETTLEMENT  
TYPE  
MERCANTILE



1521 A.D.

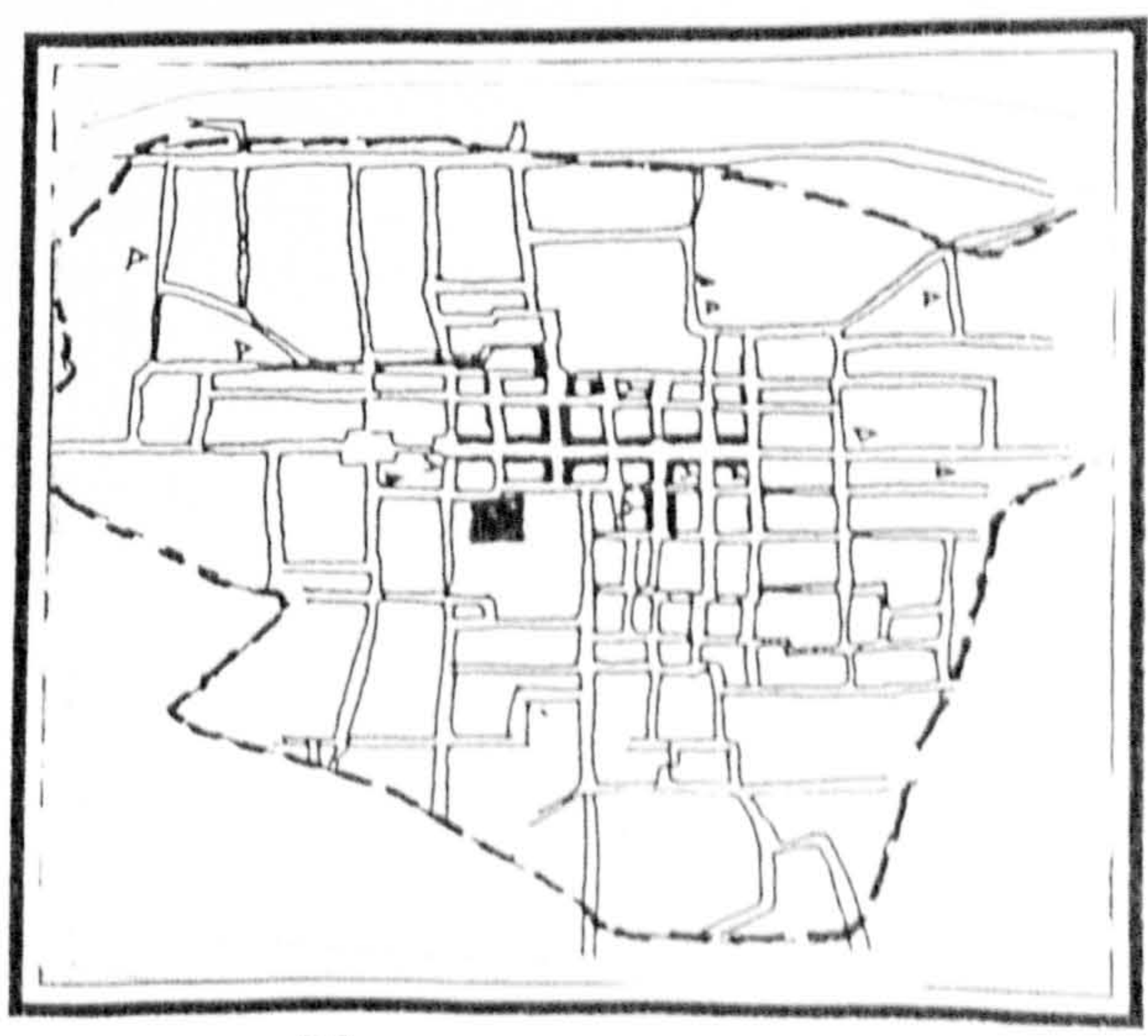
SIKAR



1687 A.D.

TOWNS

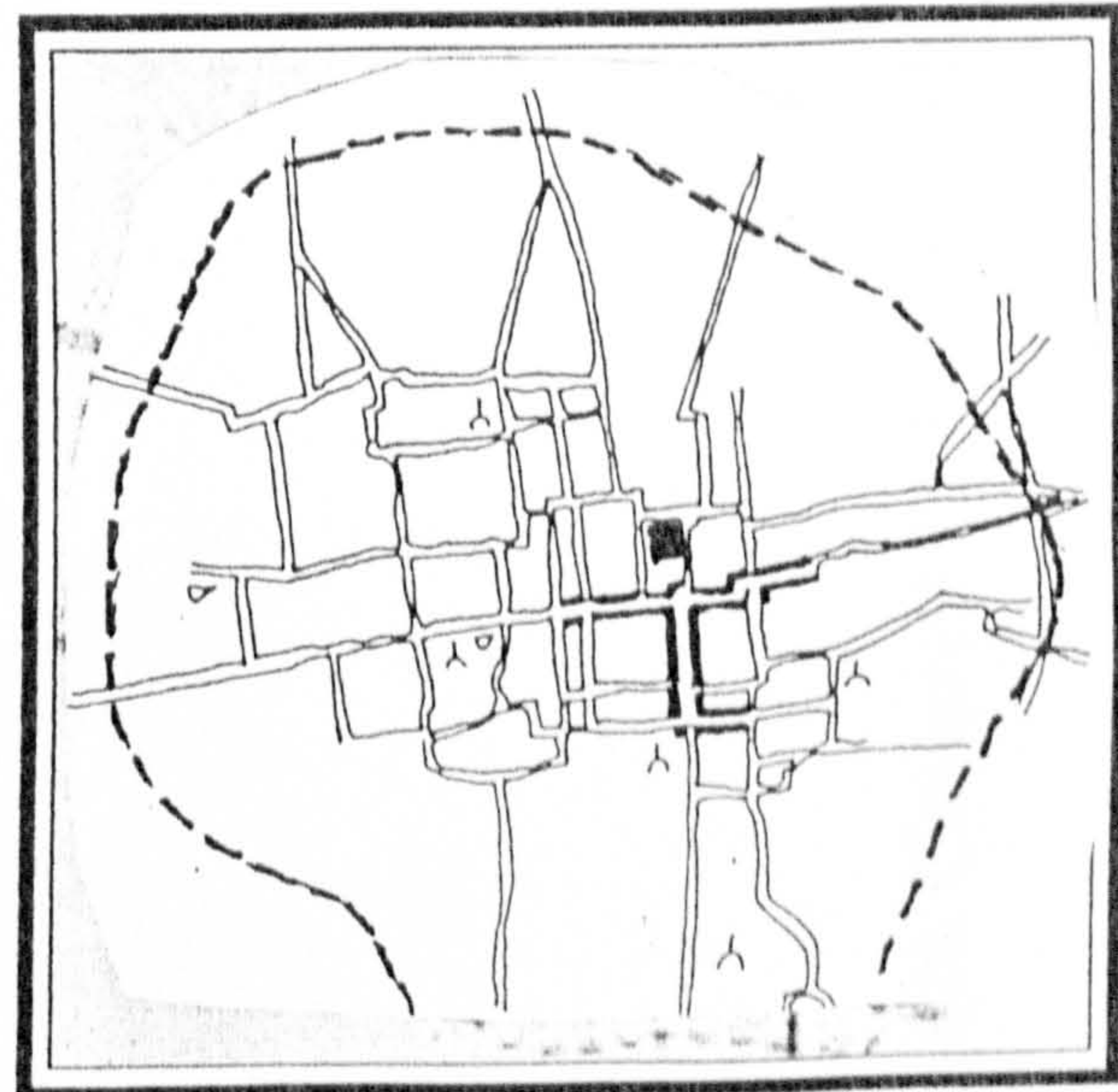
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TYPE  
MERCANTILE



1805 A.D.

LACHMANGARH

RAMGARH



1793 A.D.

MANDAWA



1760 A.D.

1731 A.D.



## **Appendix--C - Entrances of *Havelis* Covered in Fieldwork**



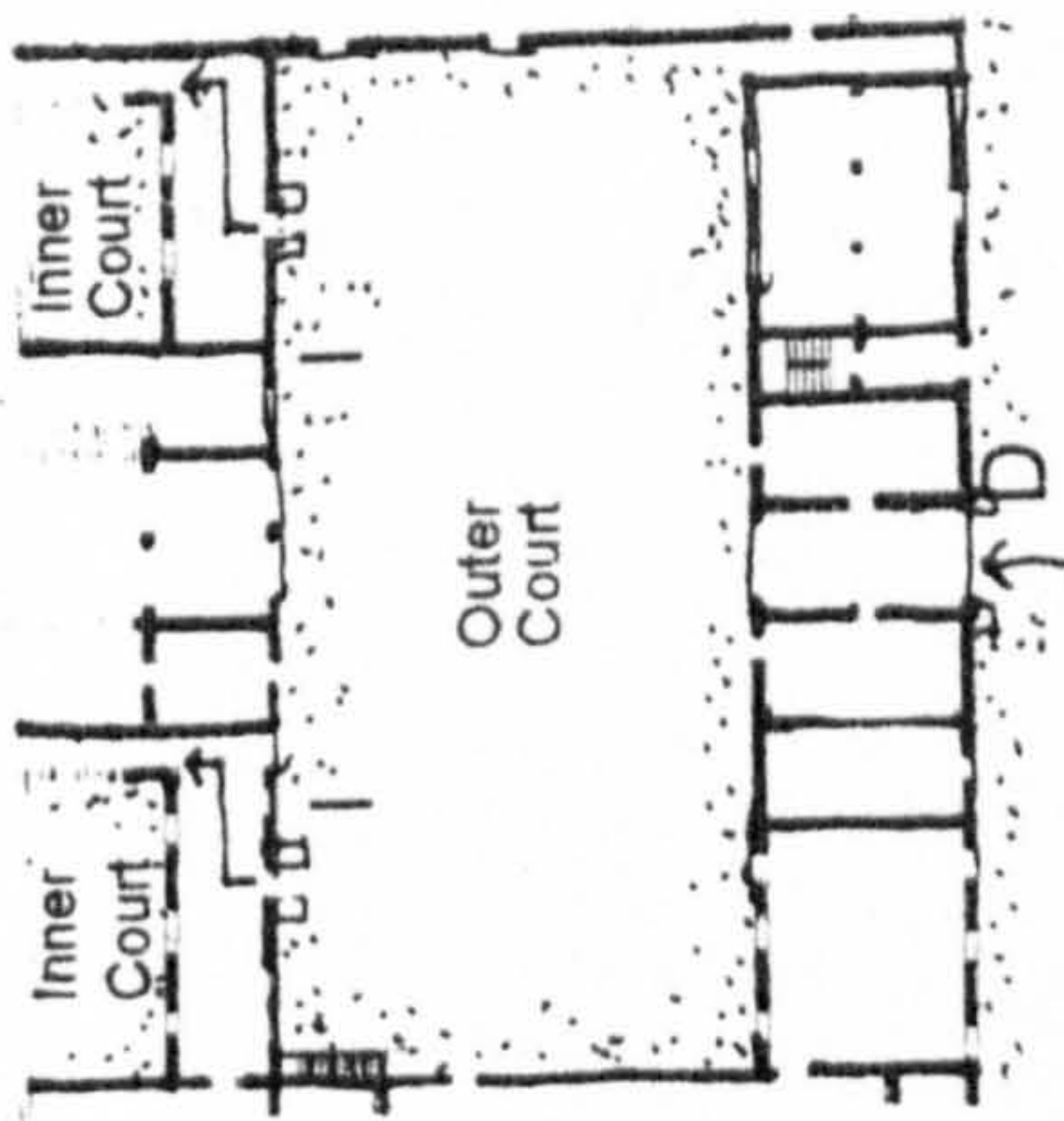
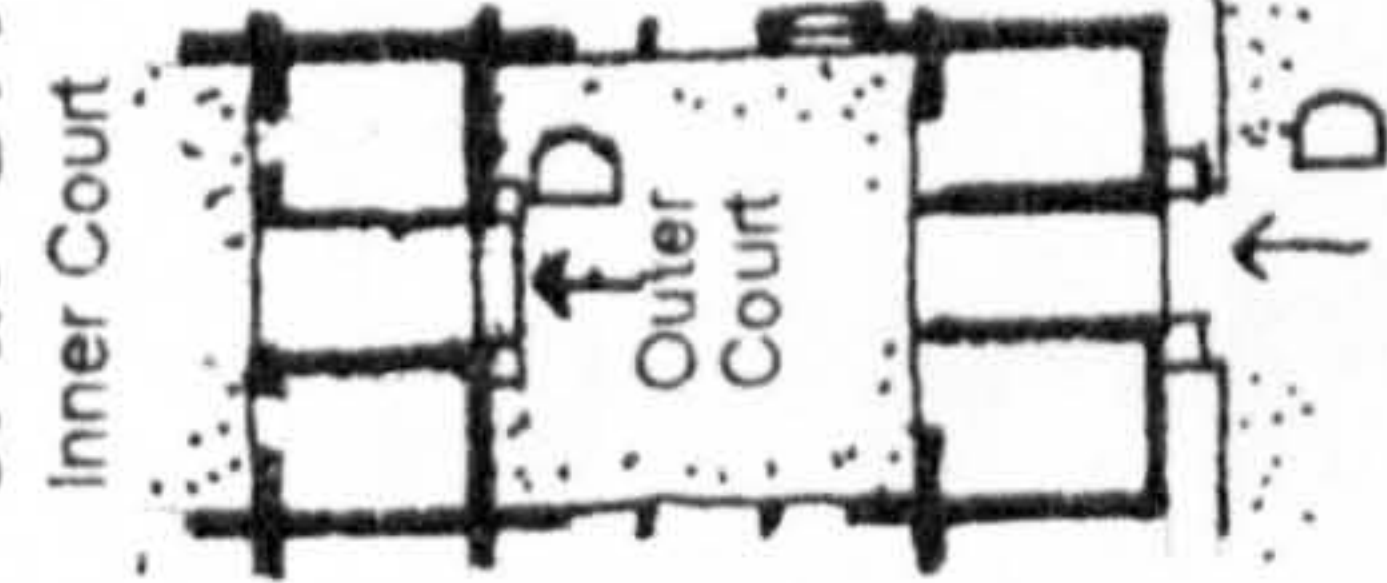
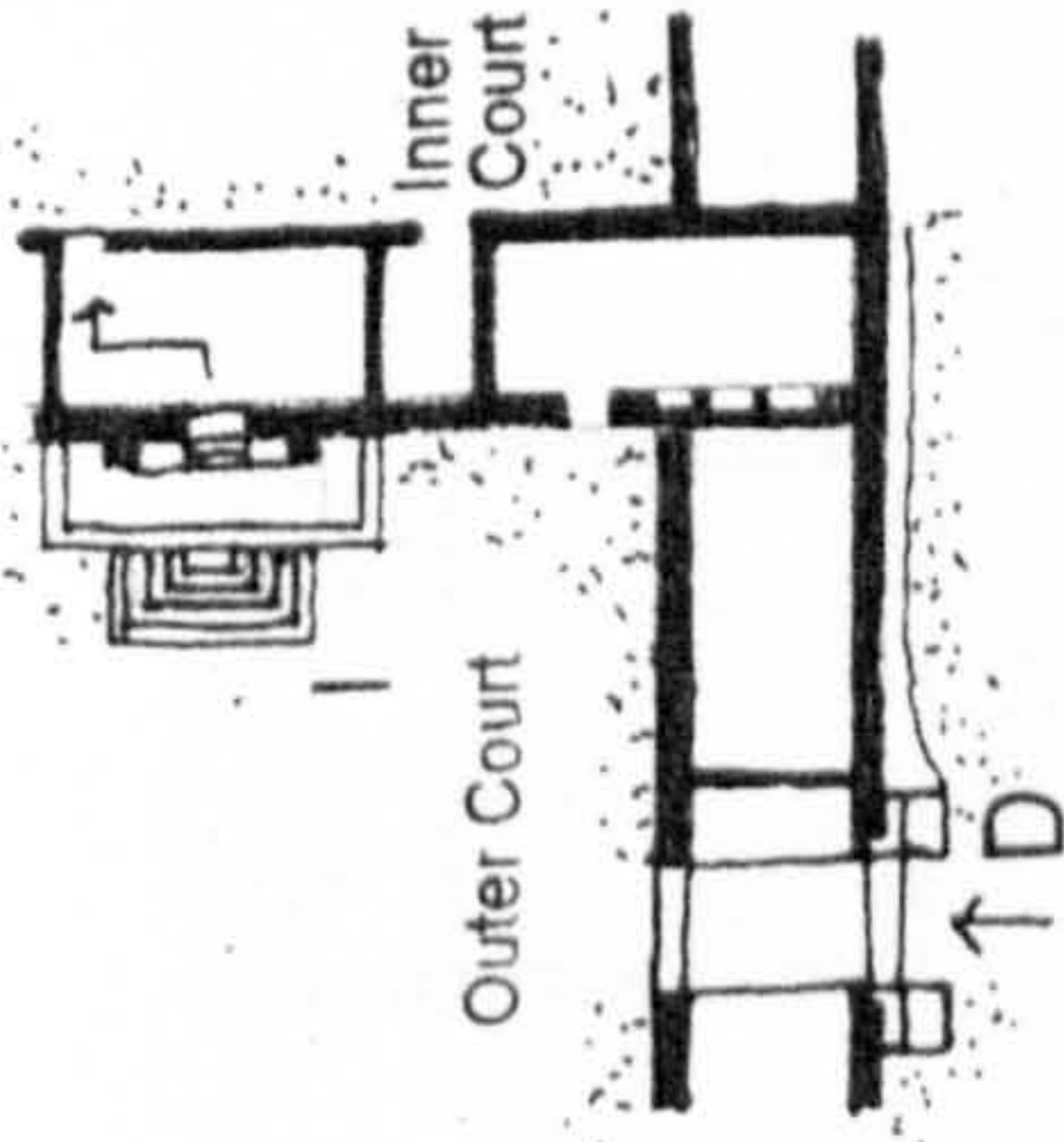
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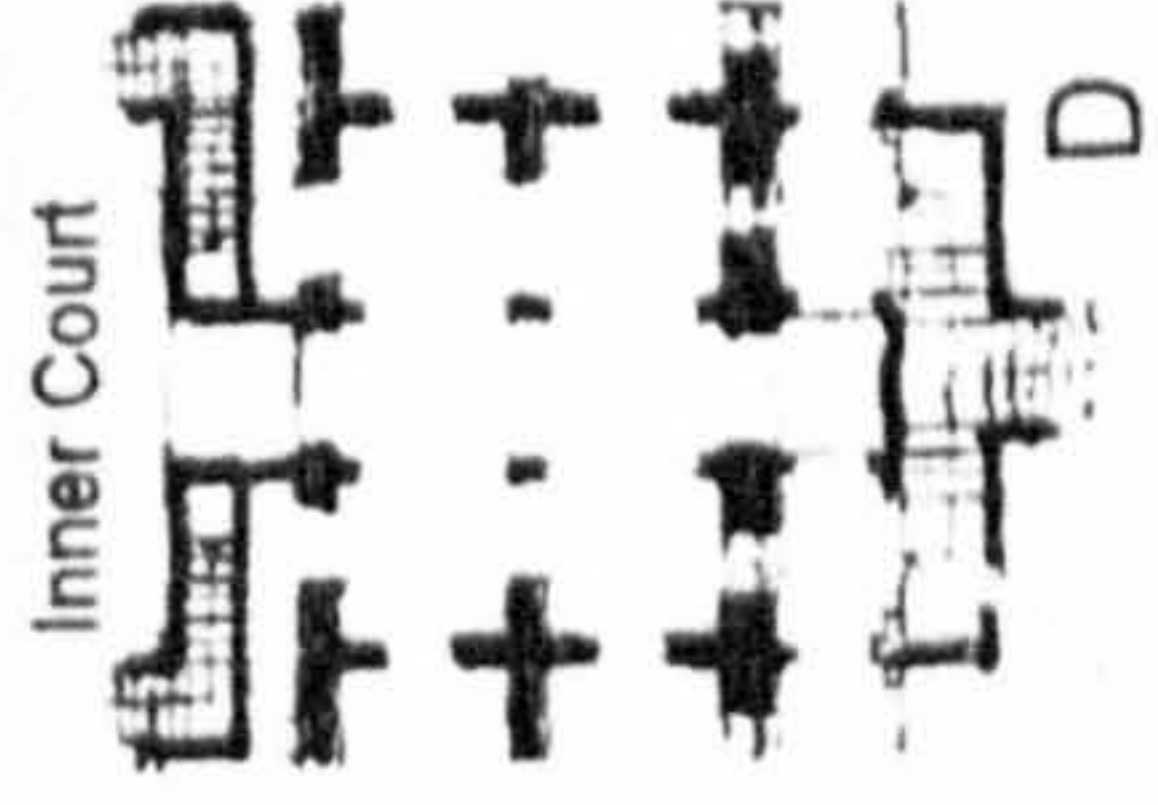
INDIRECT - I

TOWNS DAUSA AMBER SANGANER SAMODE

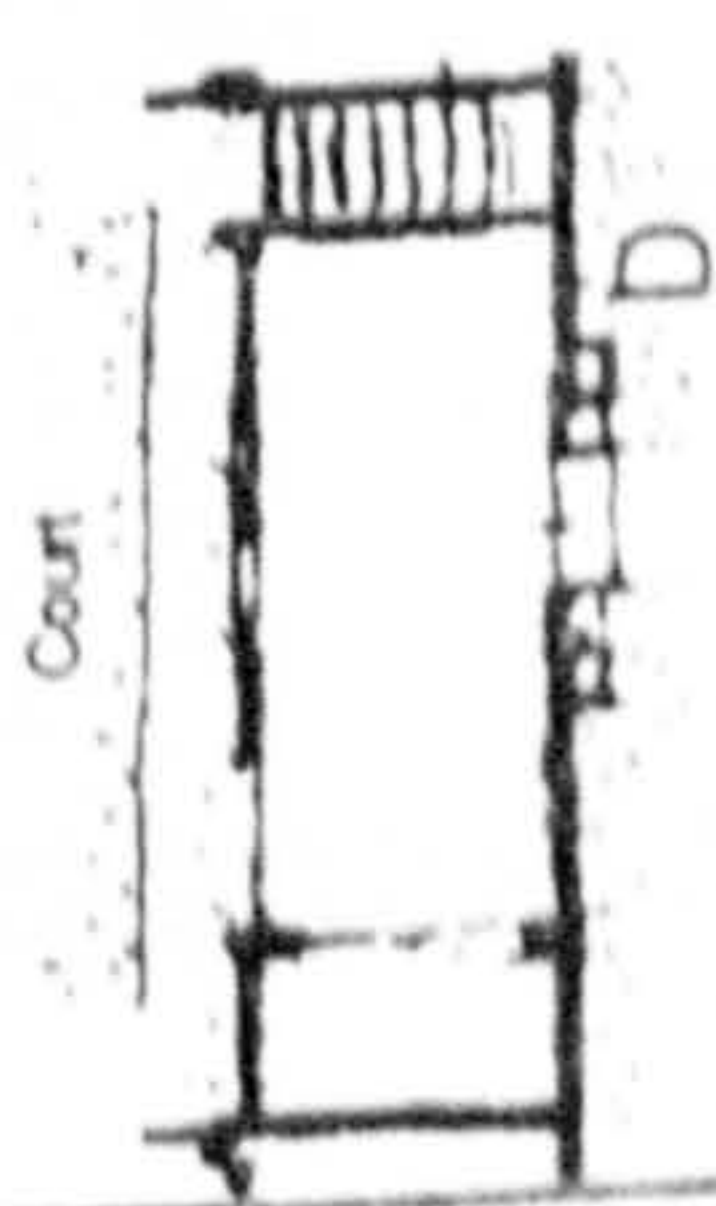
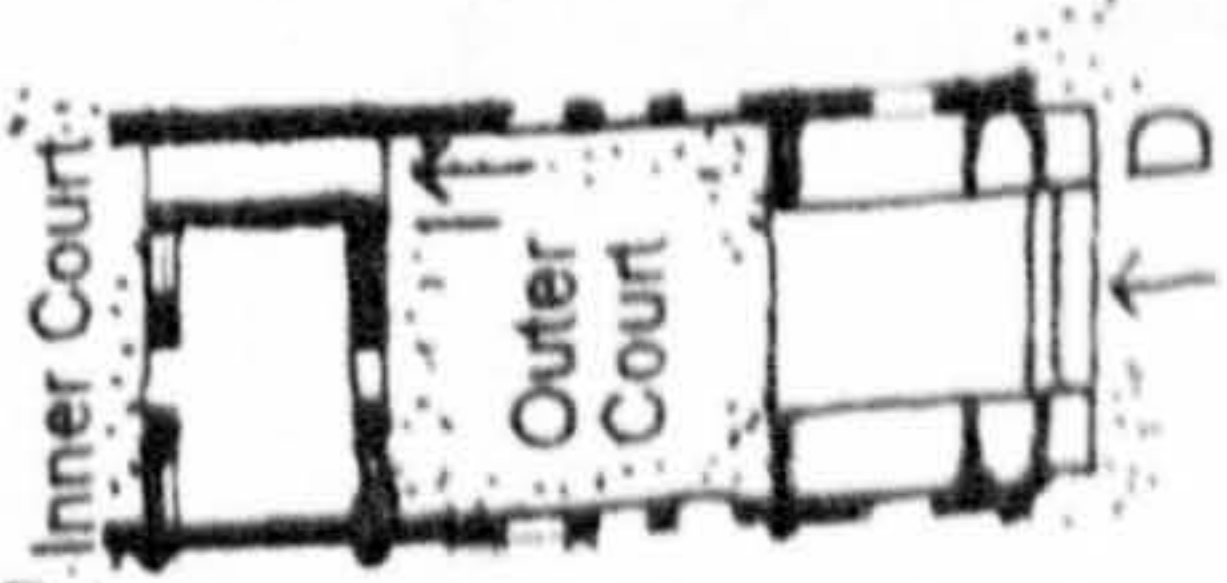
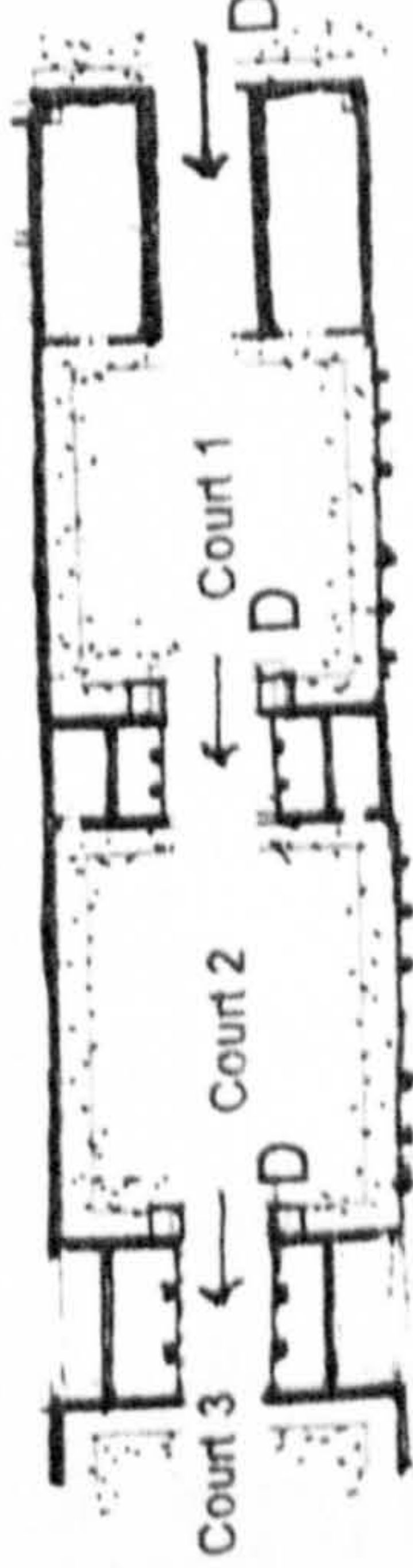
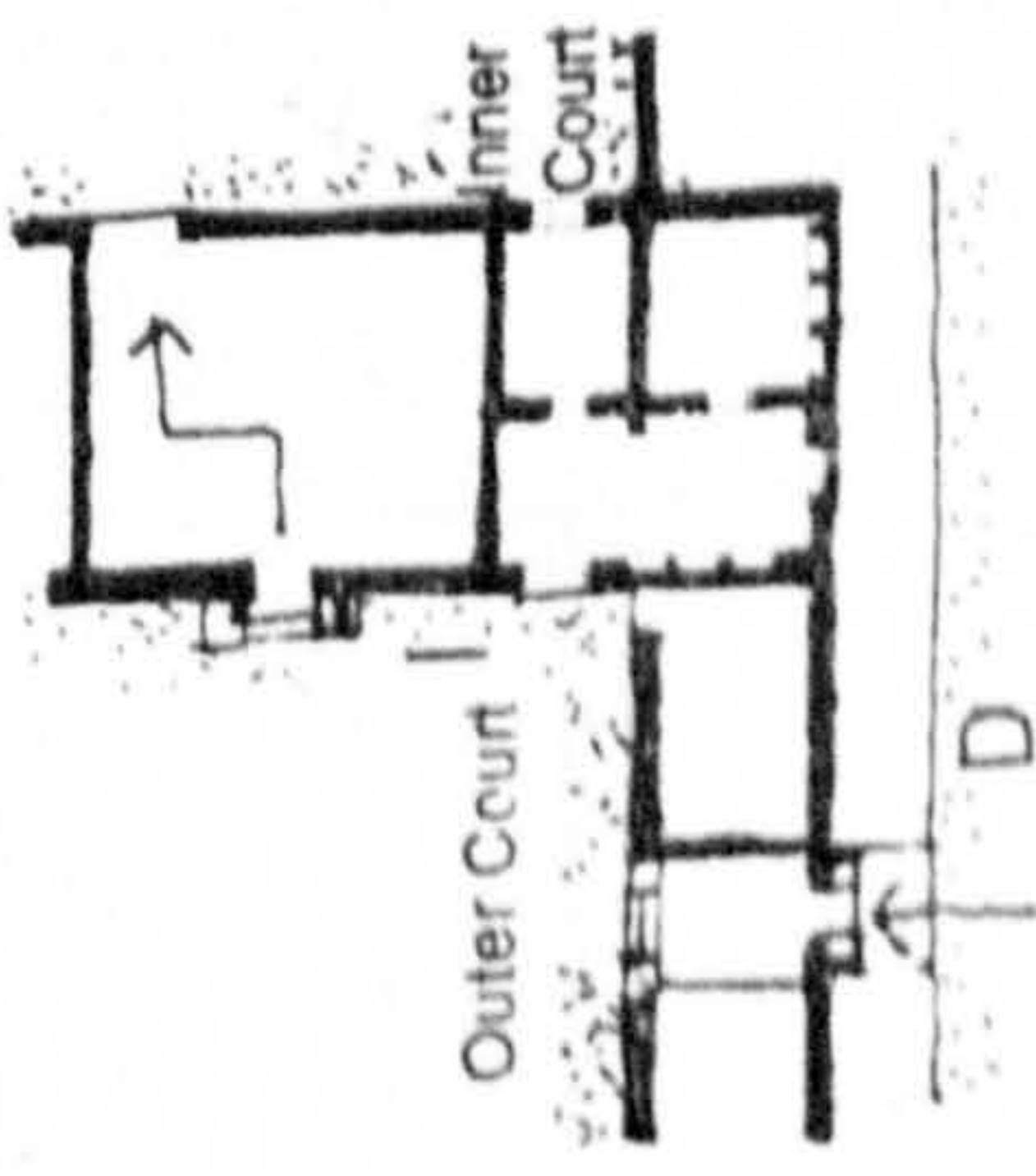
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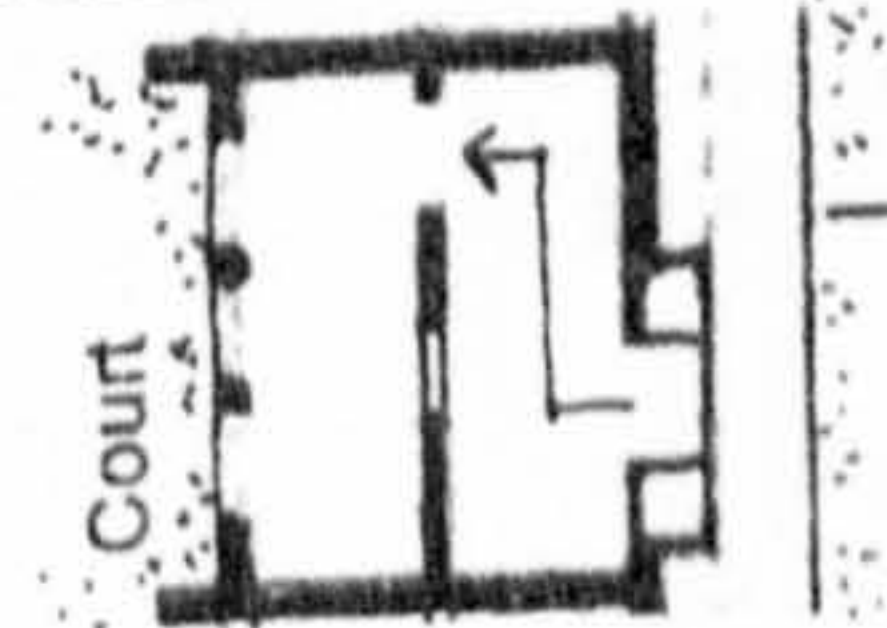
BRAHMIN



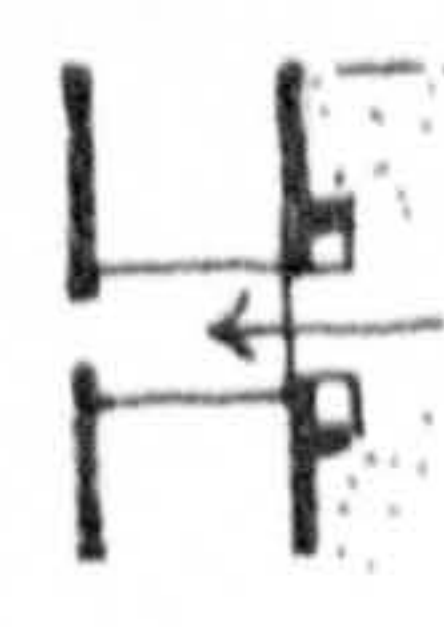
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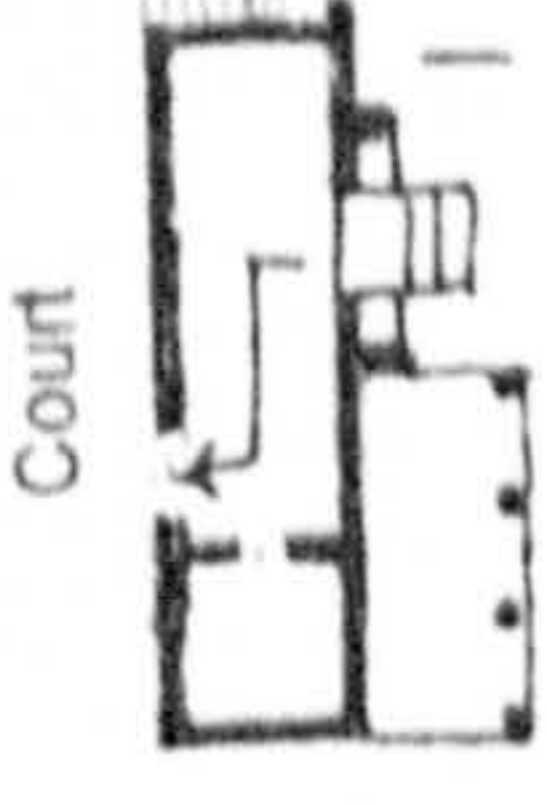
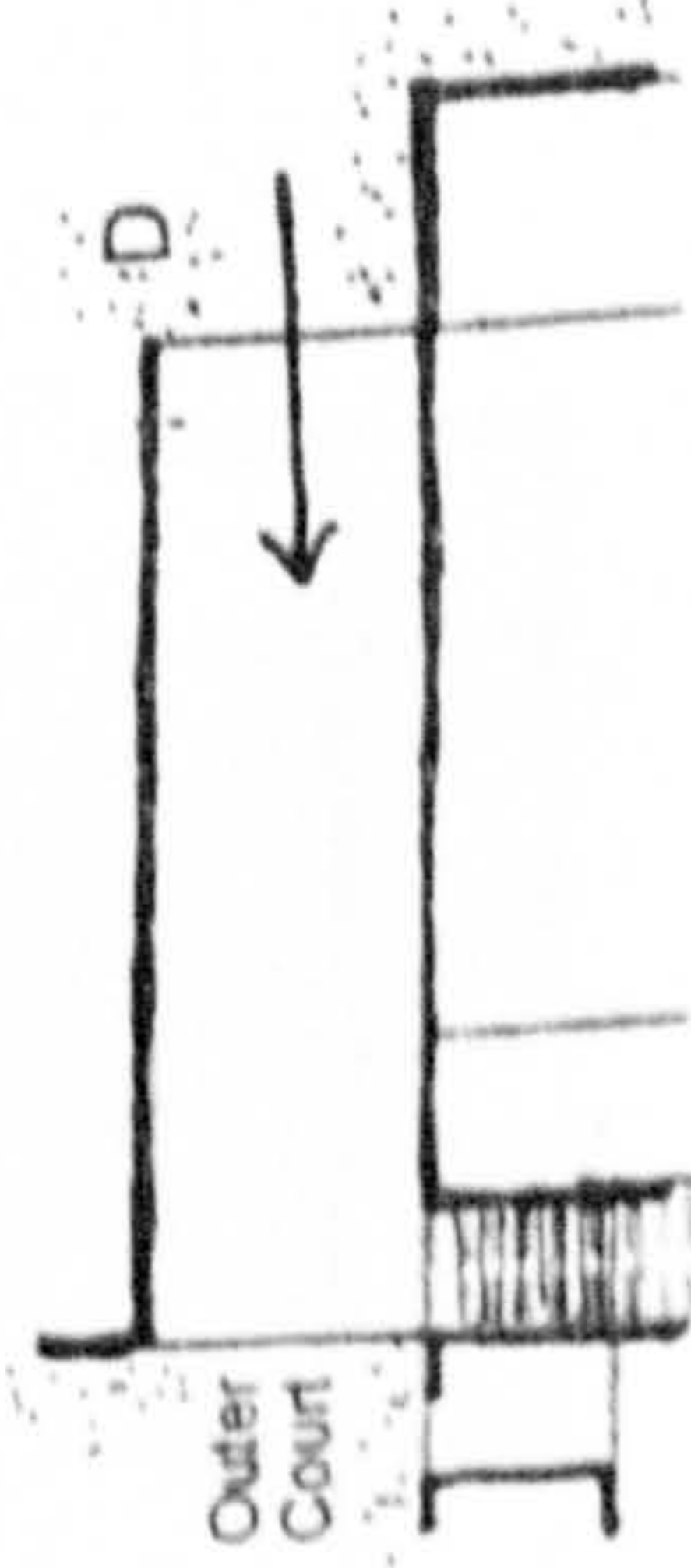
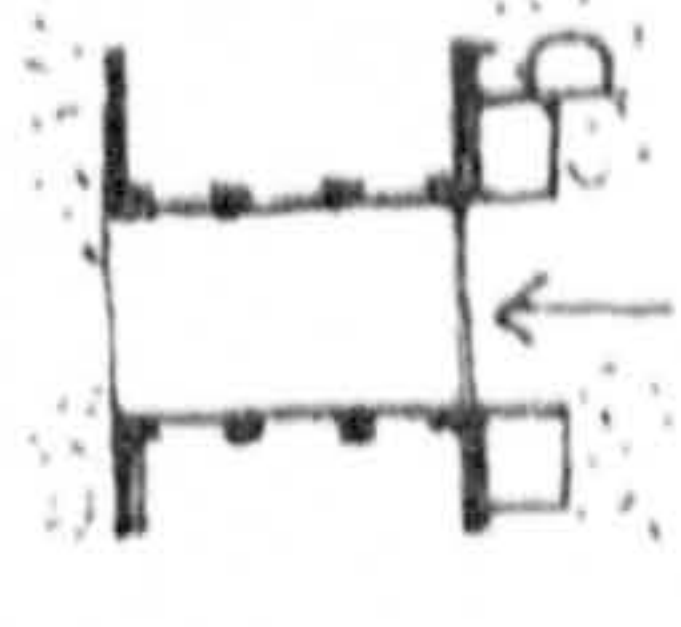
MARWARI



Inner Court



Outer Court



Court

MUSLIM / OTHERS



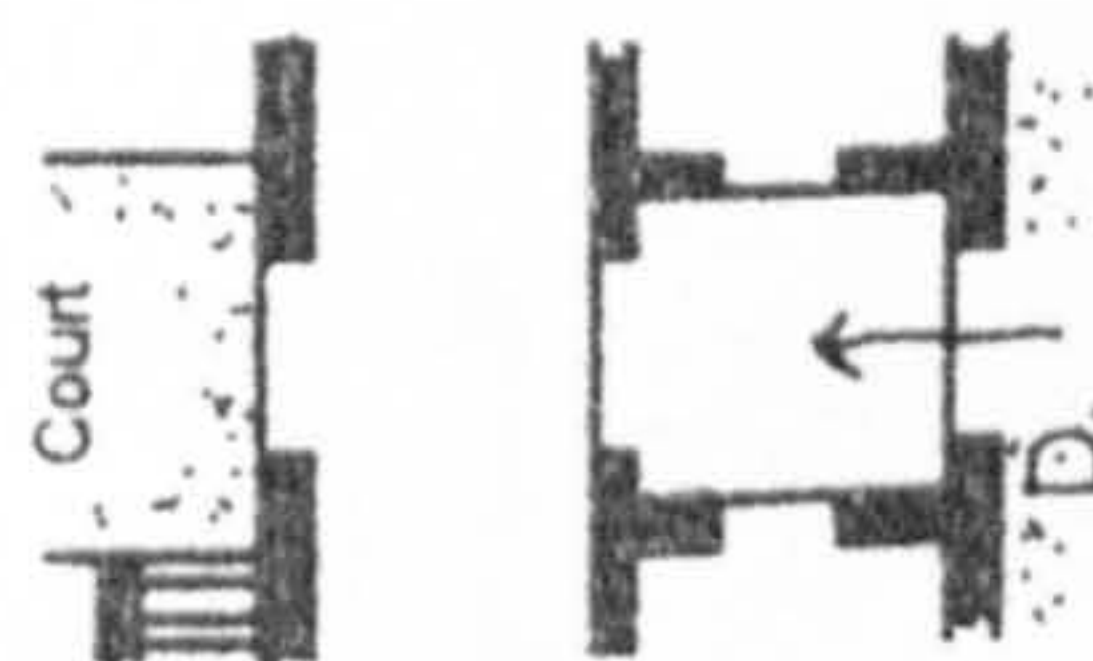
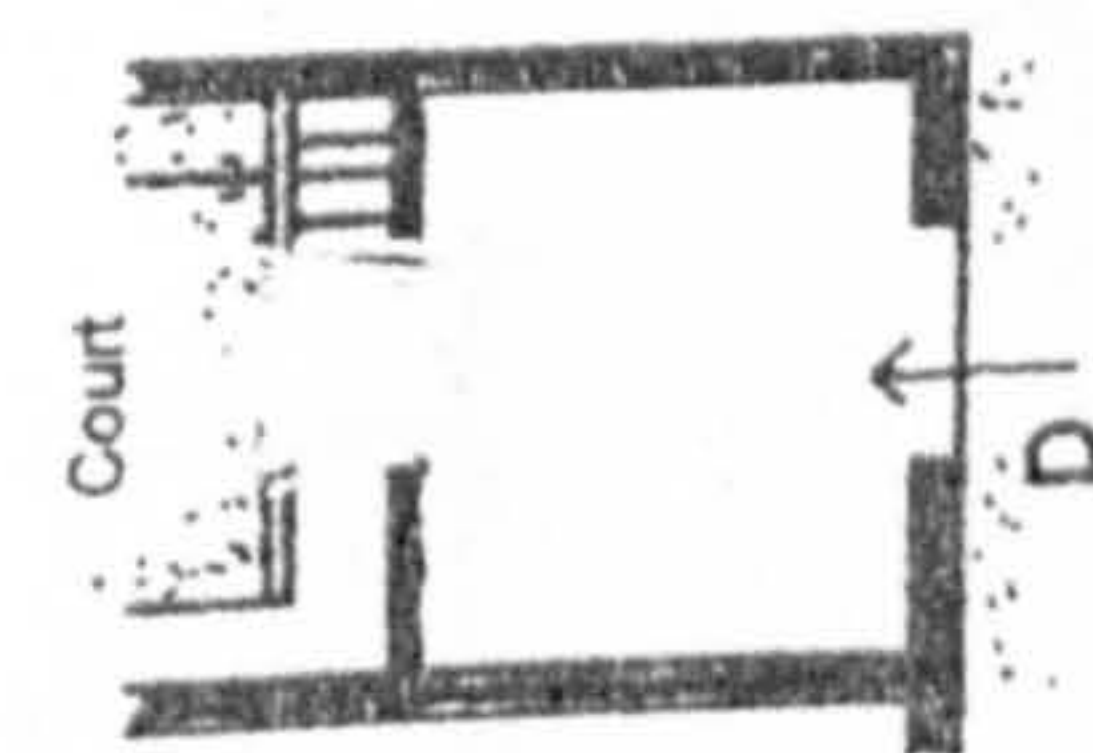
TOWNS

SIROHI

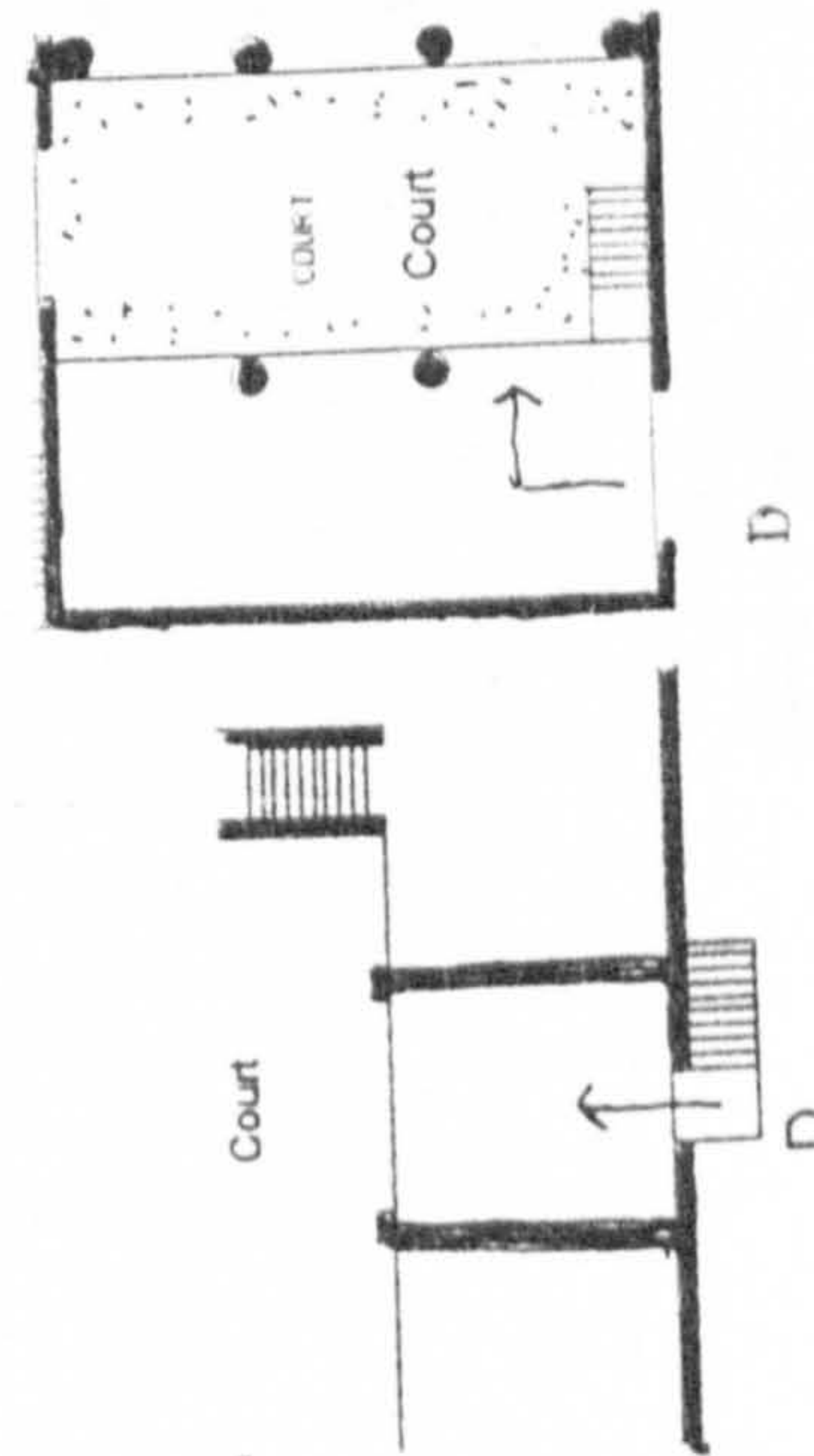
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BANSWARA

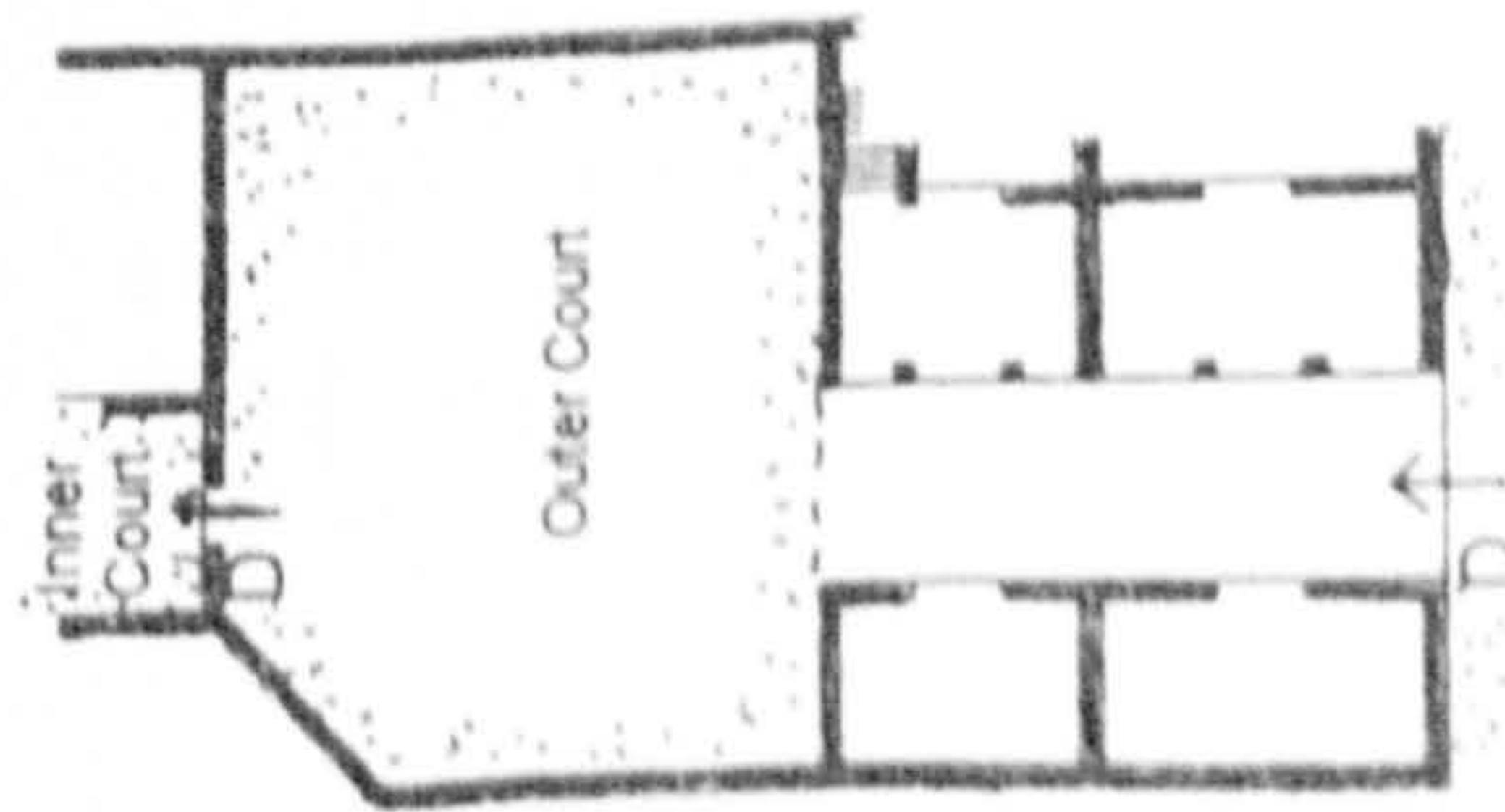
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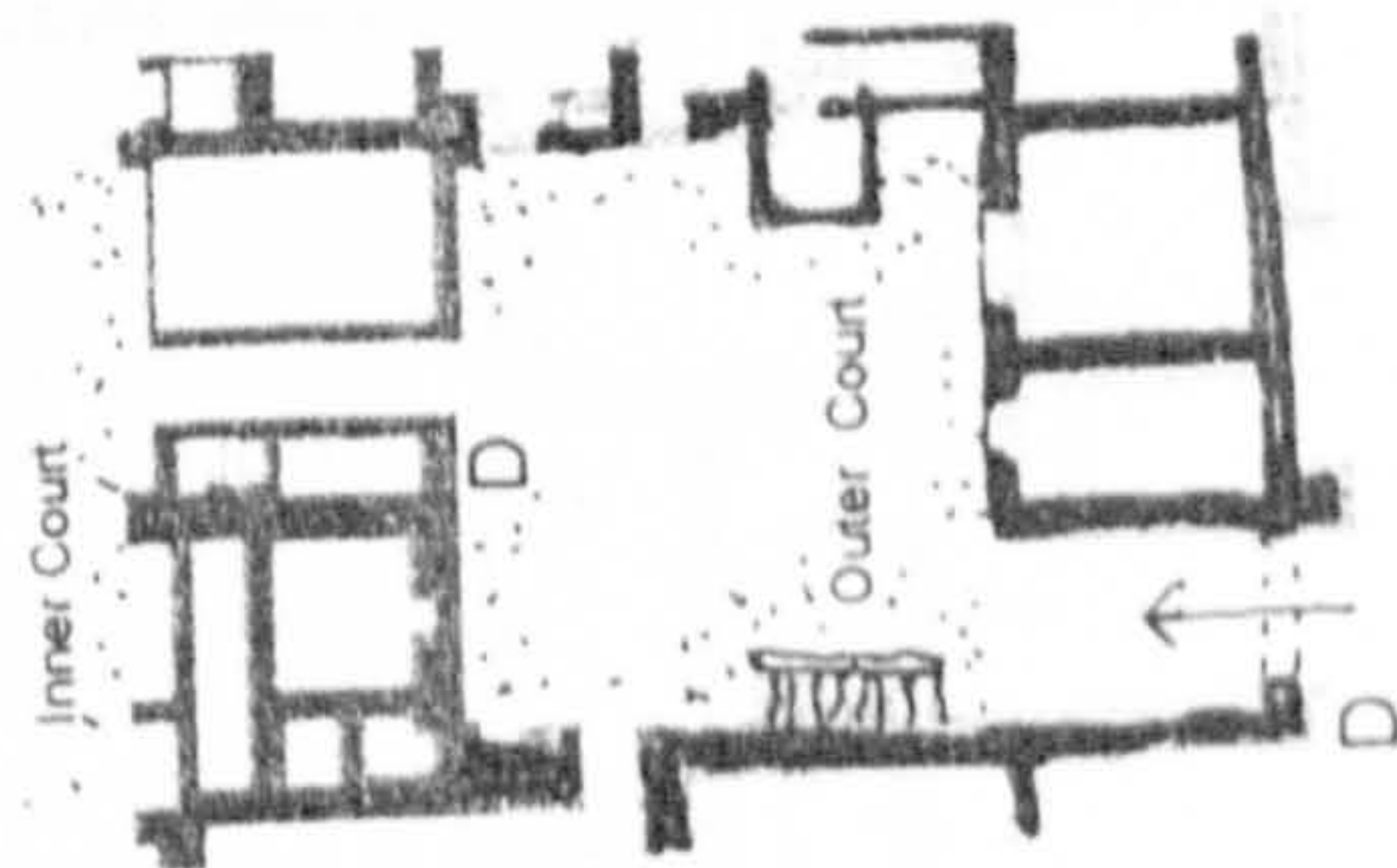
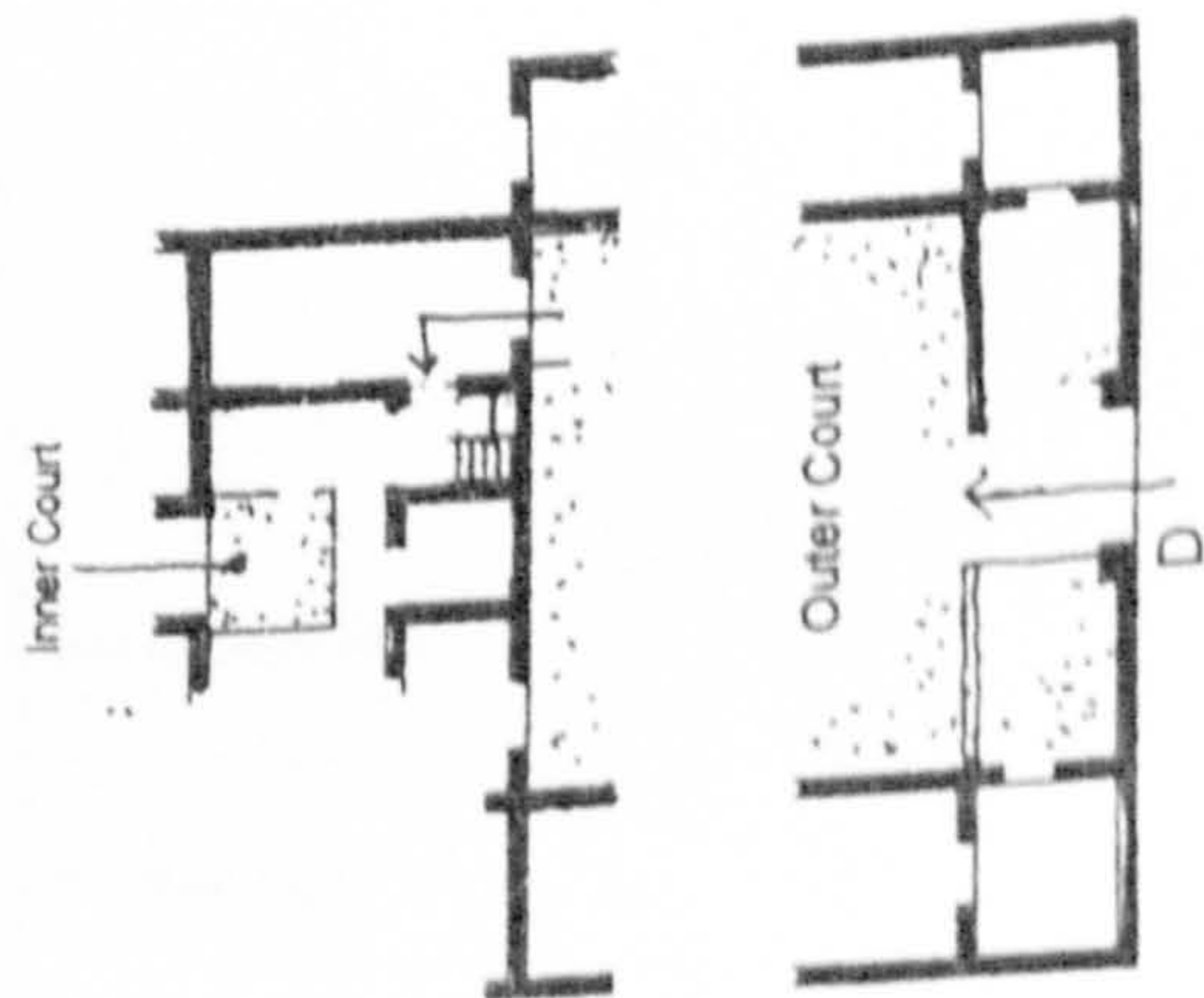
BRAHMIN



RAJPUT



MARWARI





# ENTRANCES - HADOOTI REGION

DIRECT - D INDIRECT - I

TOWNS

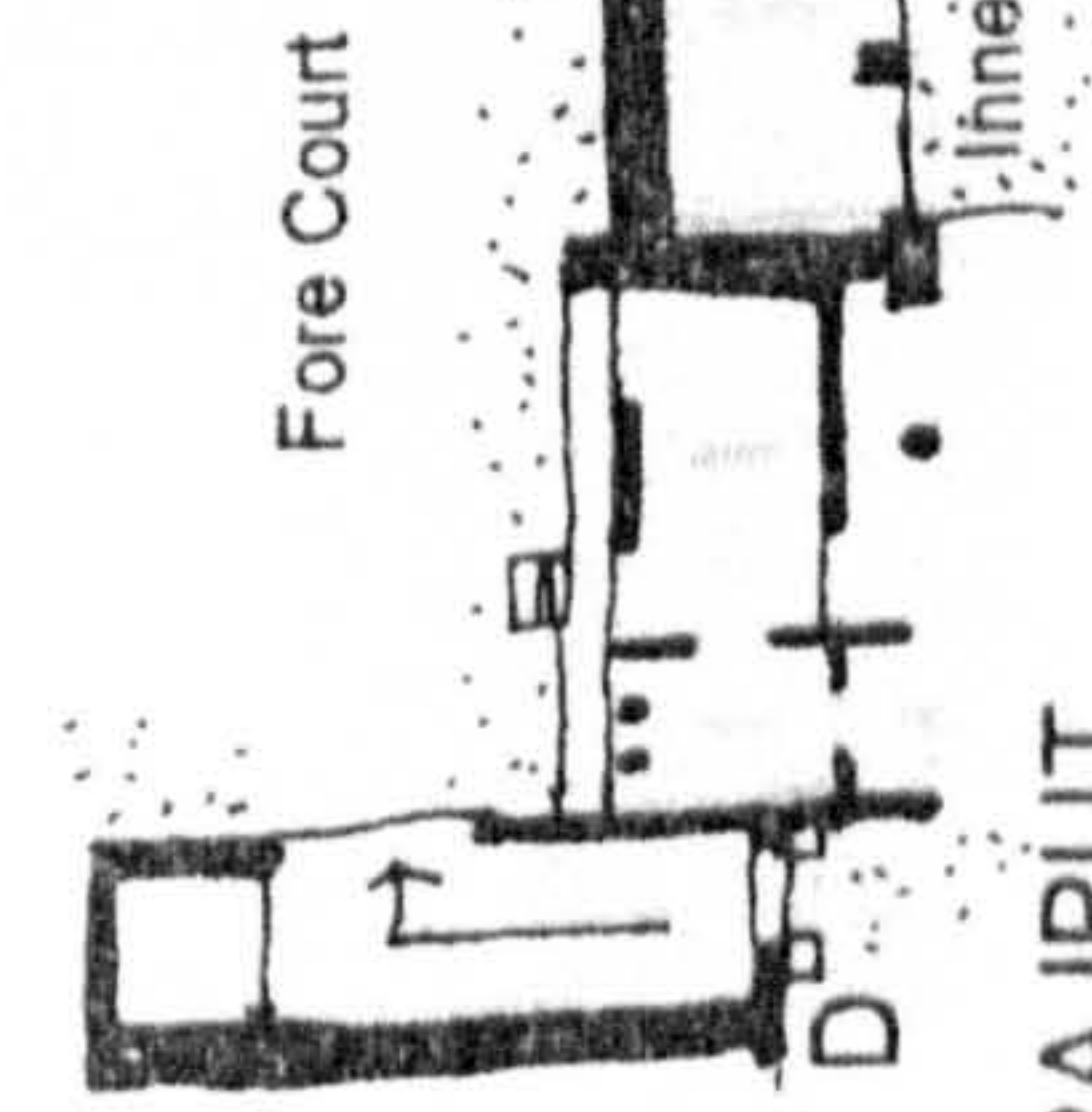
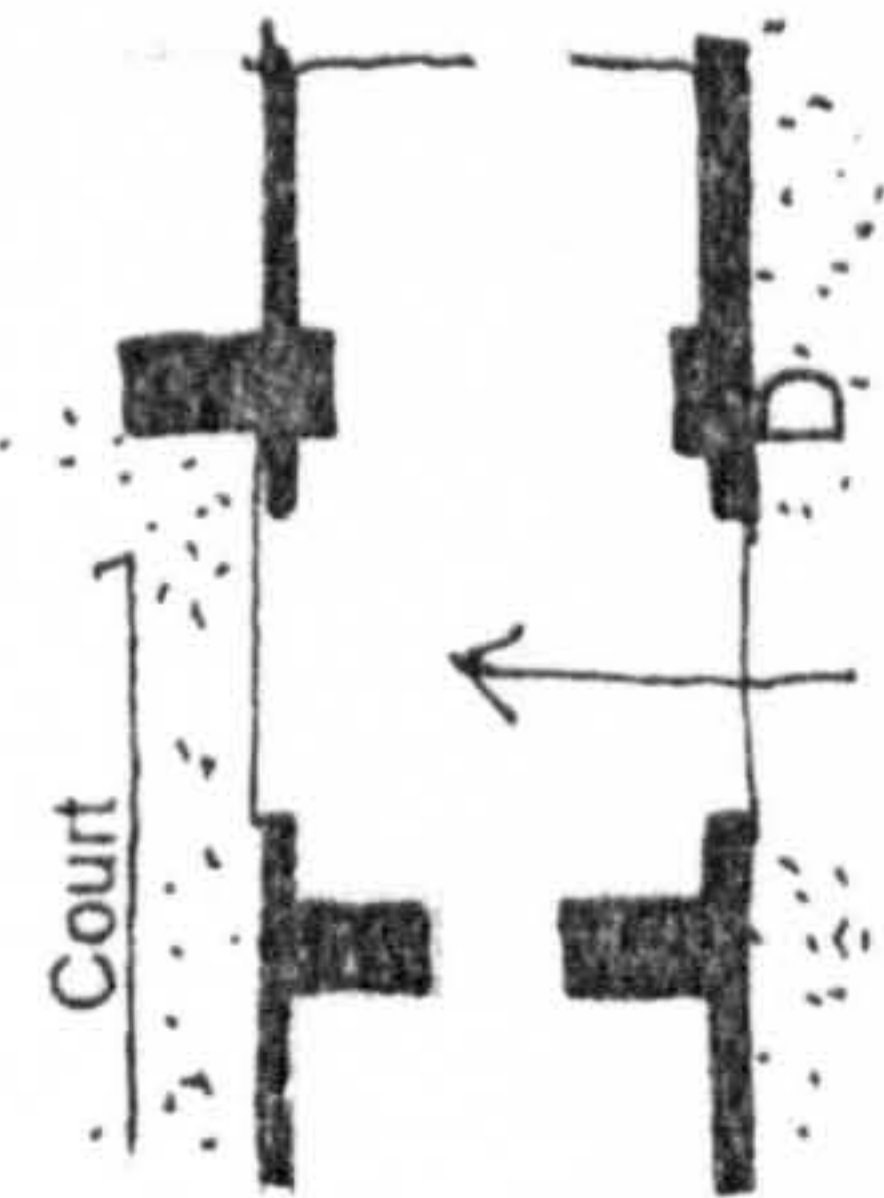
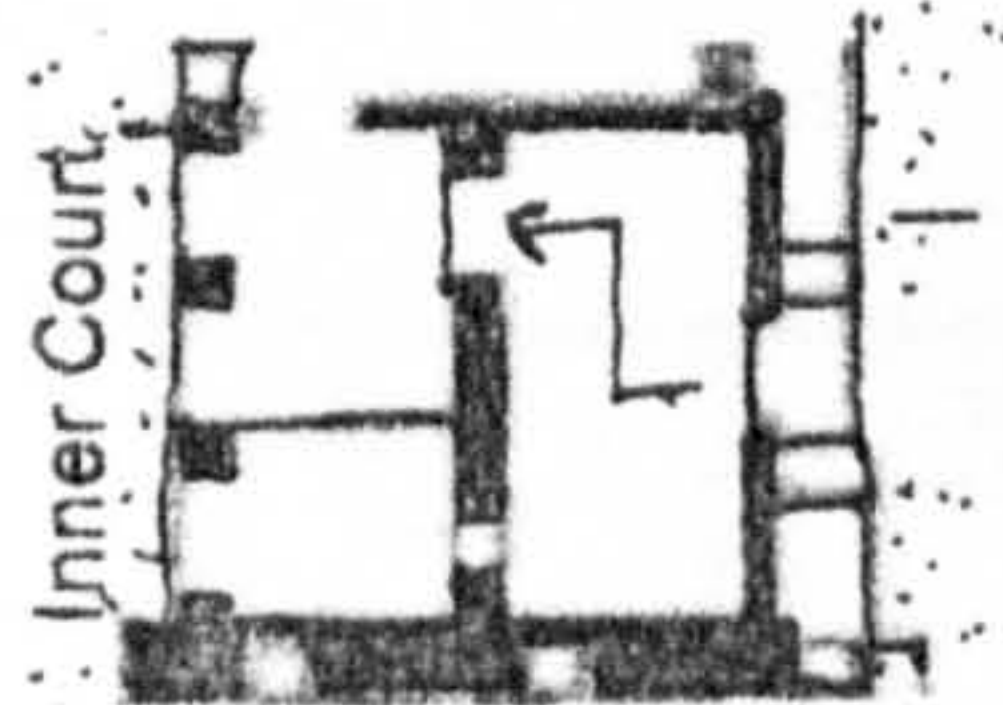
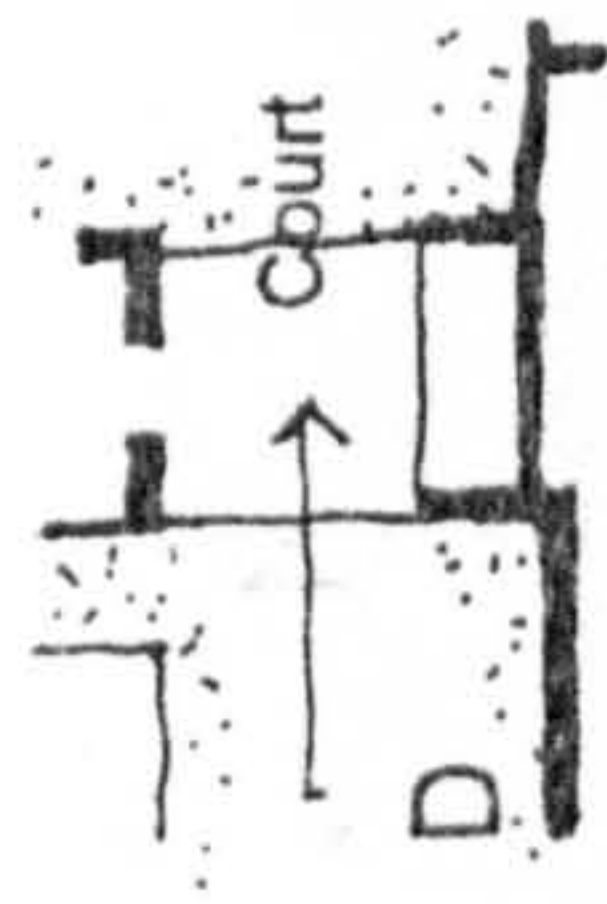
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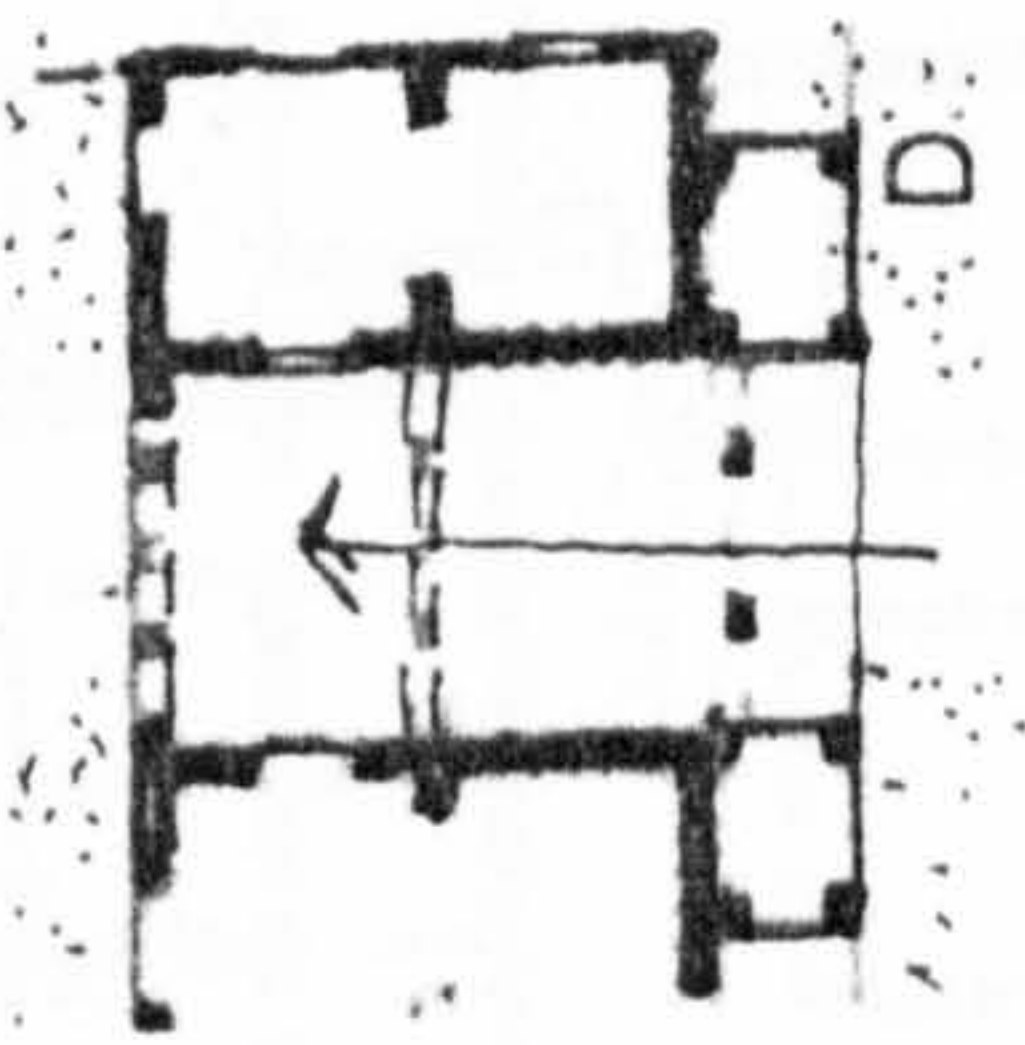
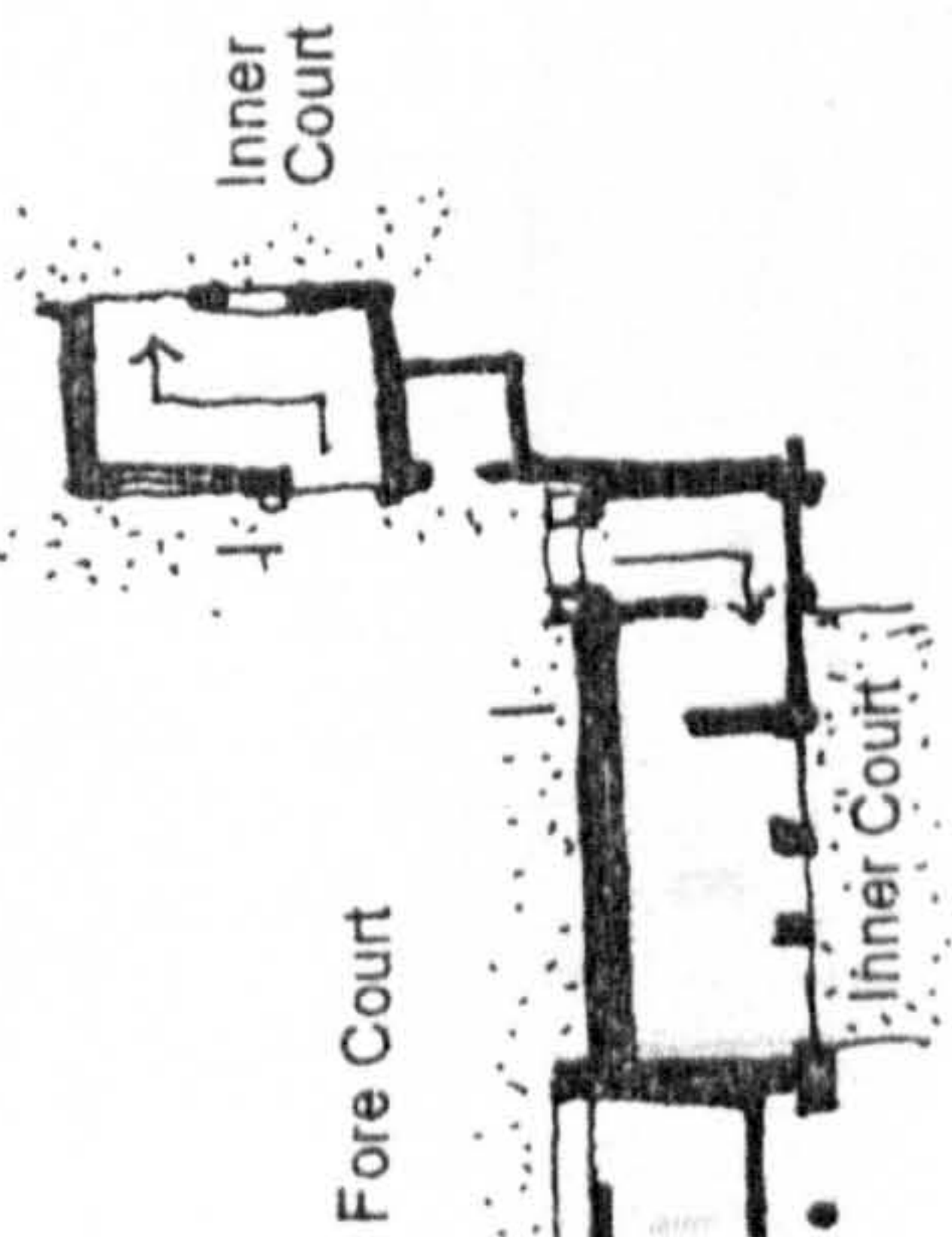
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JHALRAPATAN

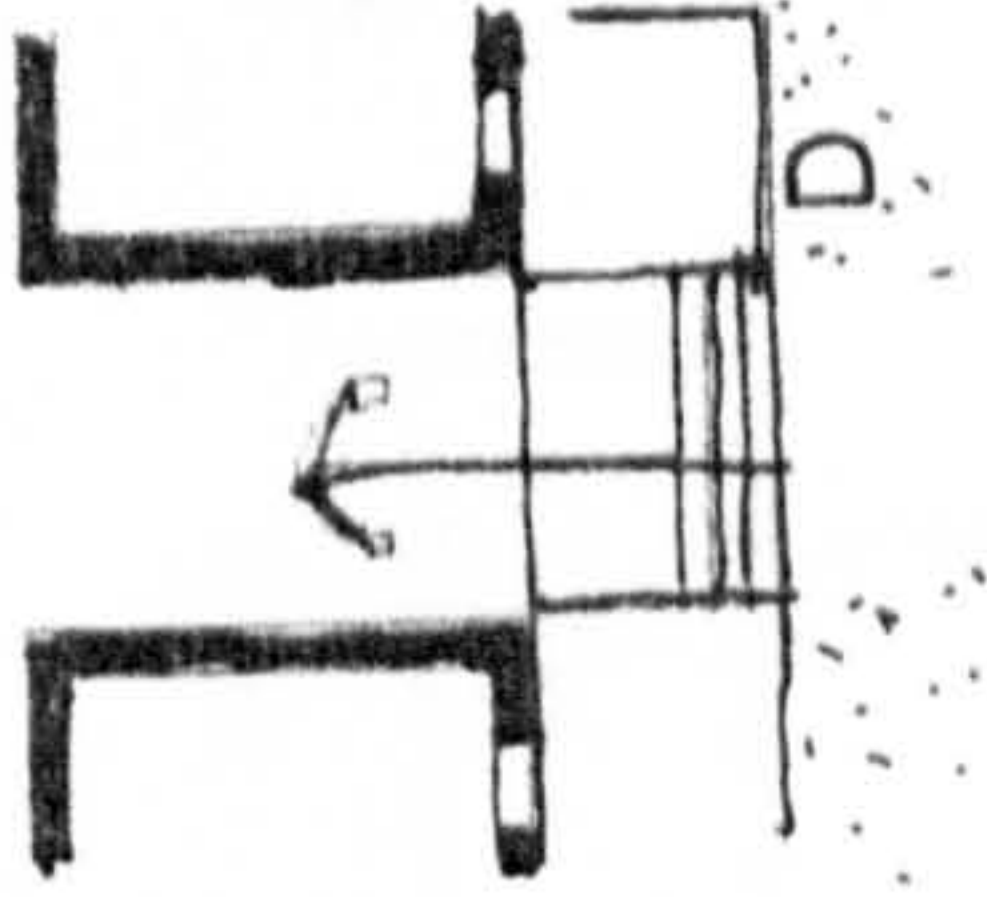
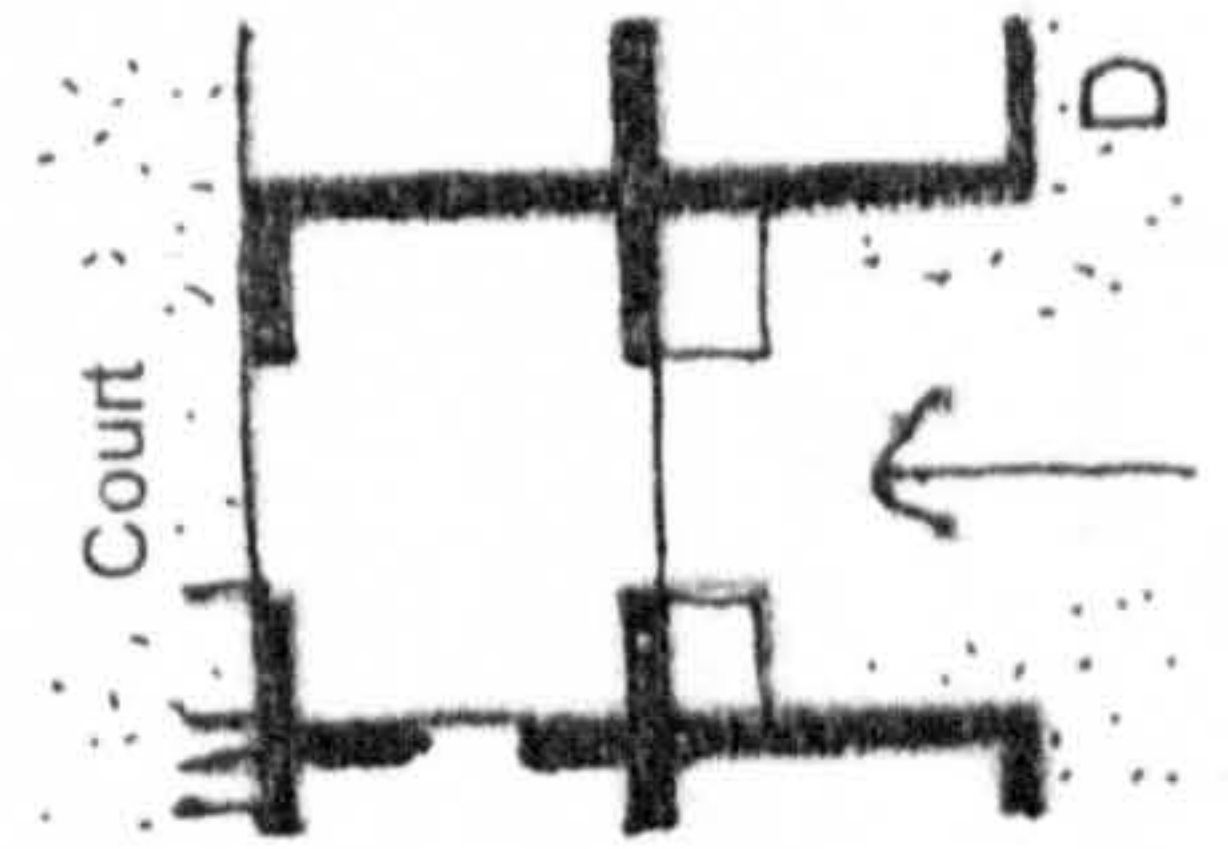
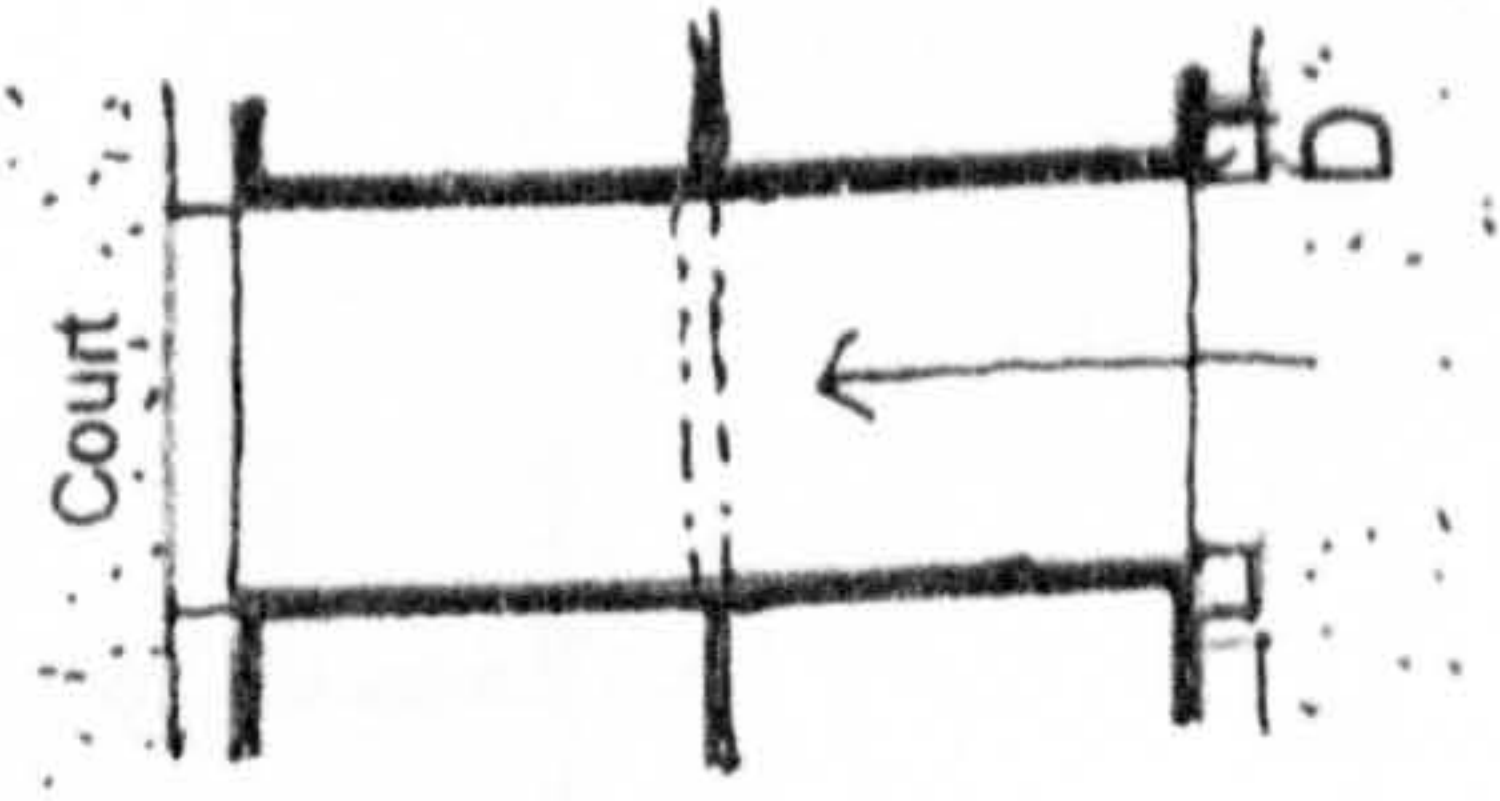
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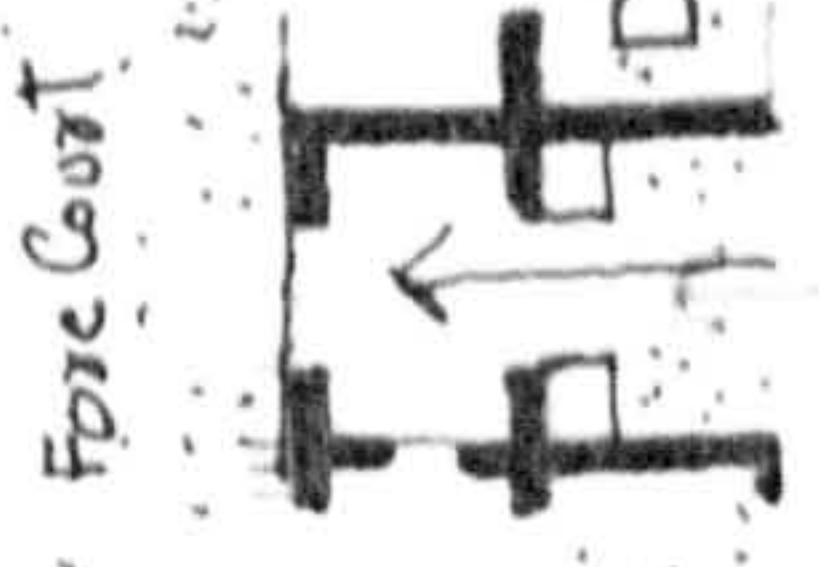
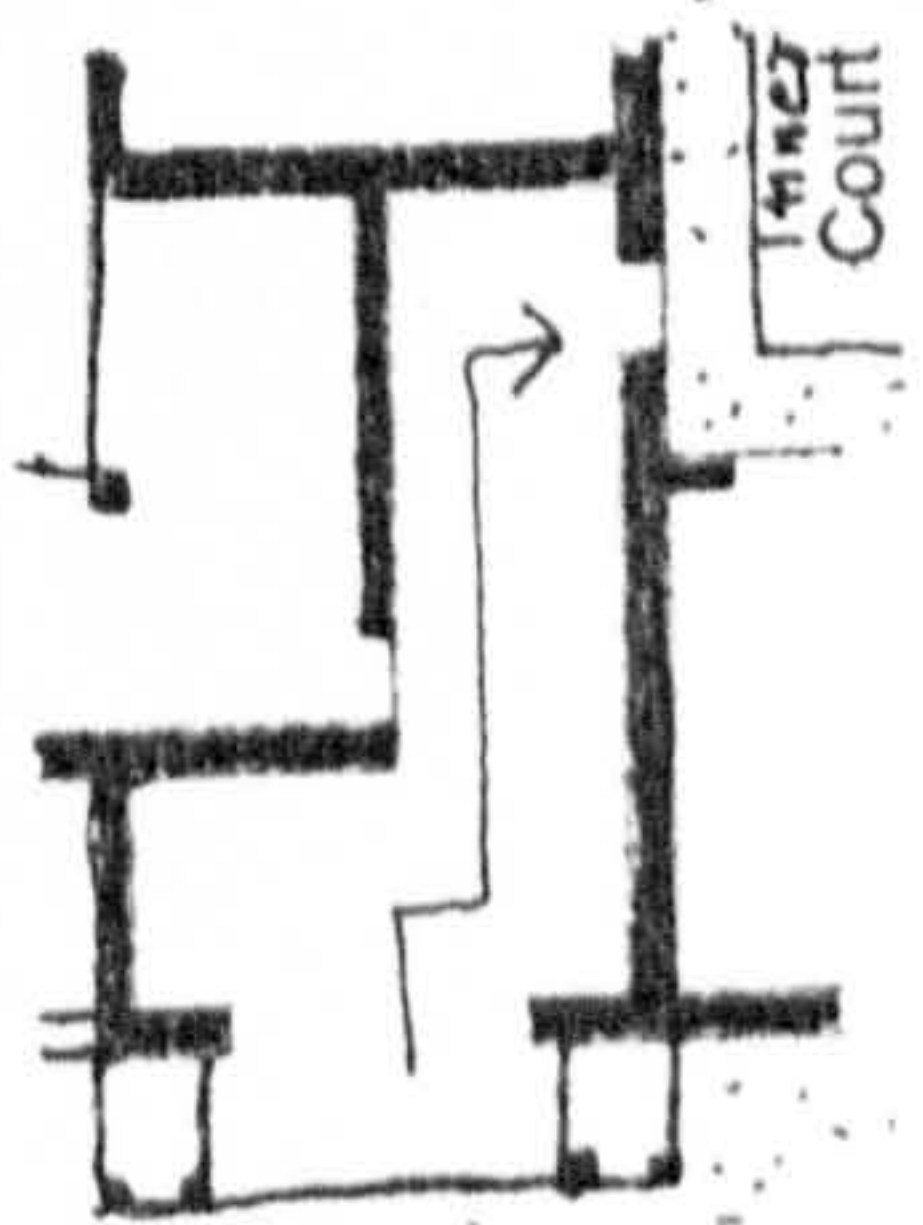
BRAHMIN



RAJPUT



MARWARI



MUSLIM  
OTHERS



# ENTRANCES - MARWAR REGION

DIRECT - D INDIRECT - I

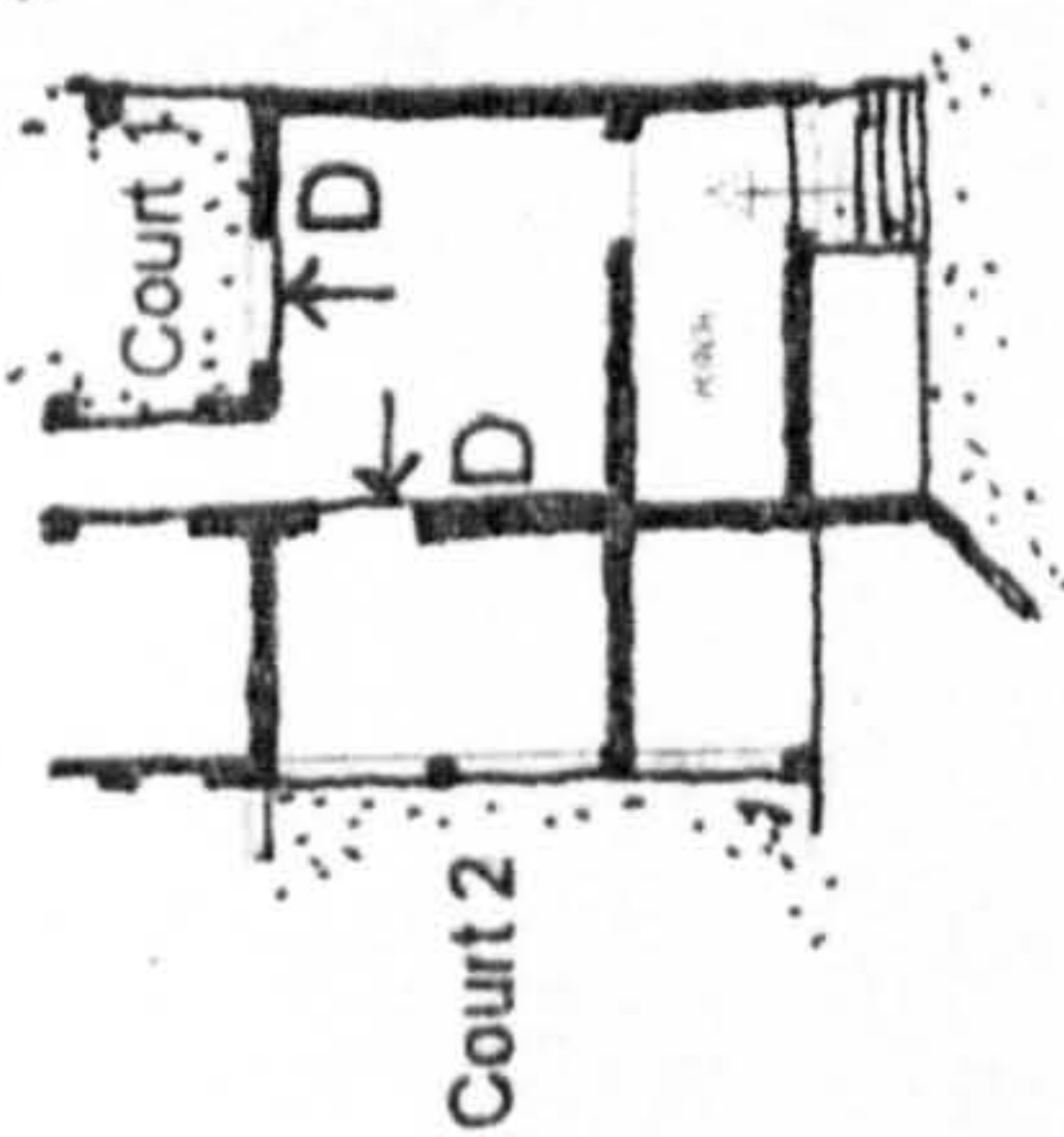
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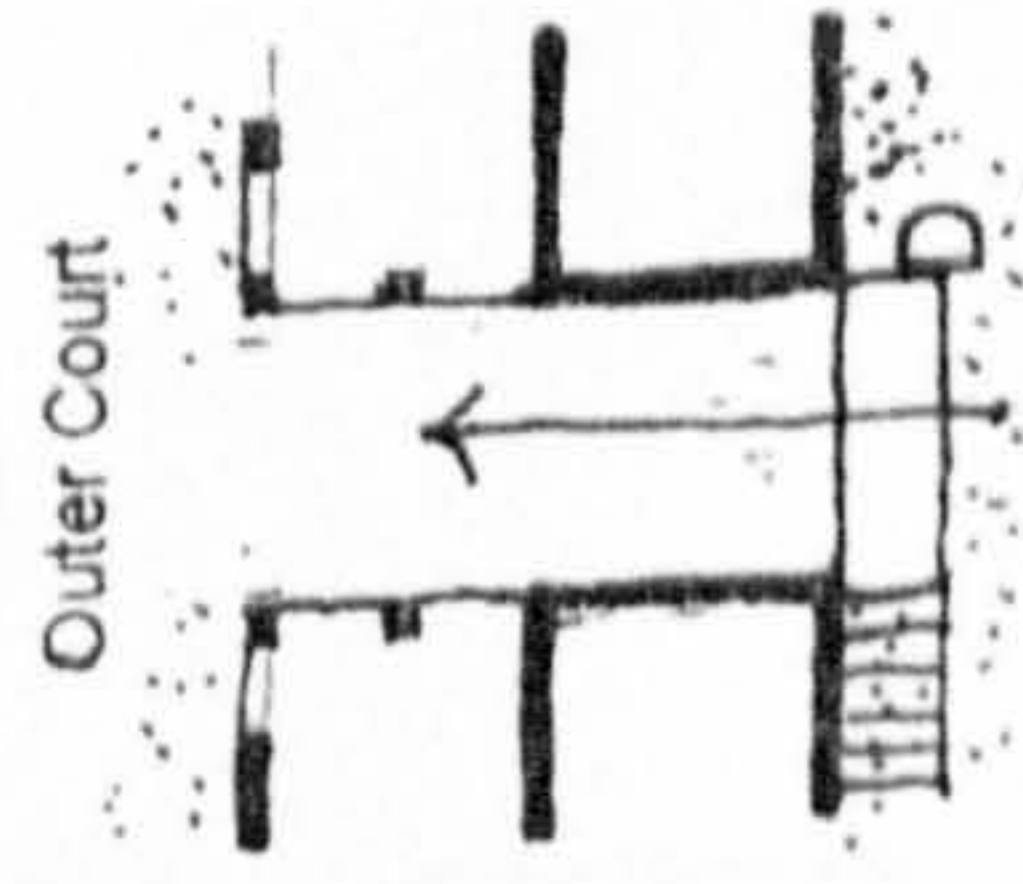
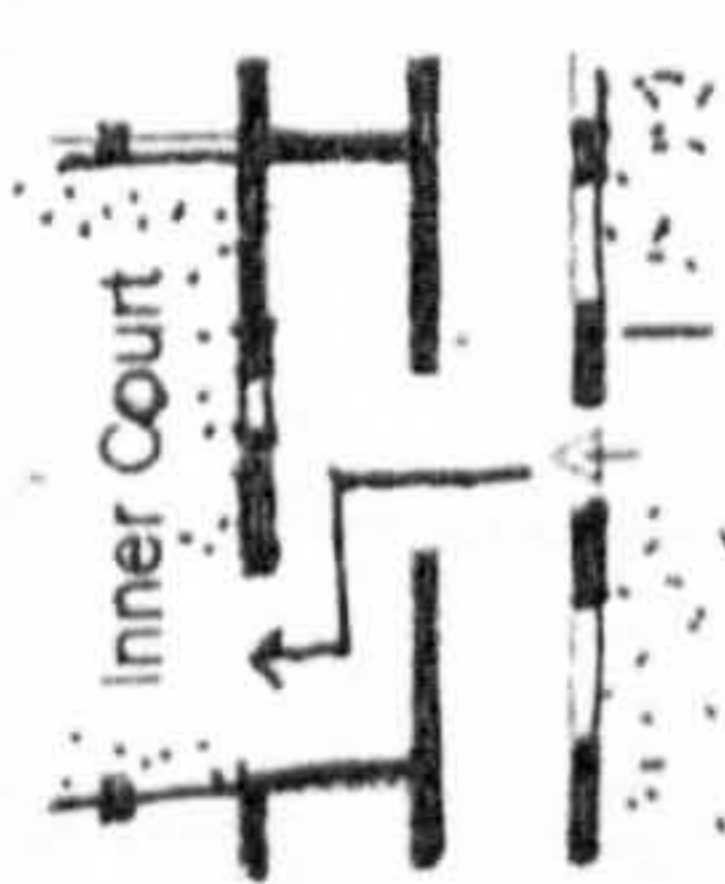
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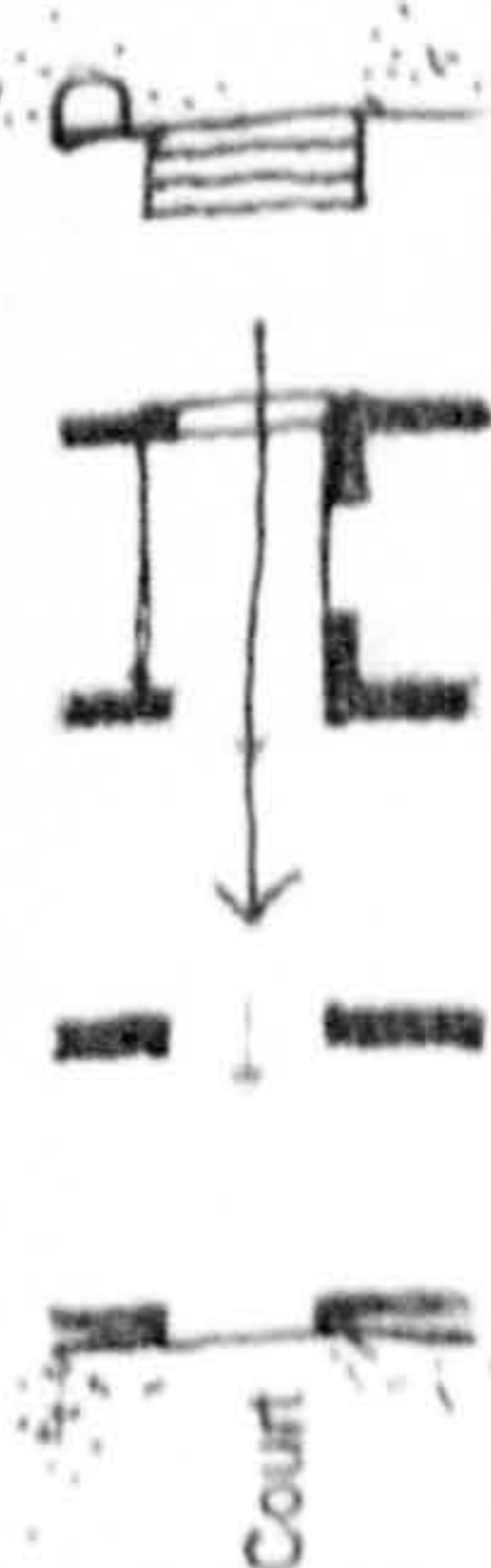
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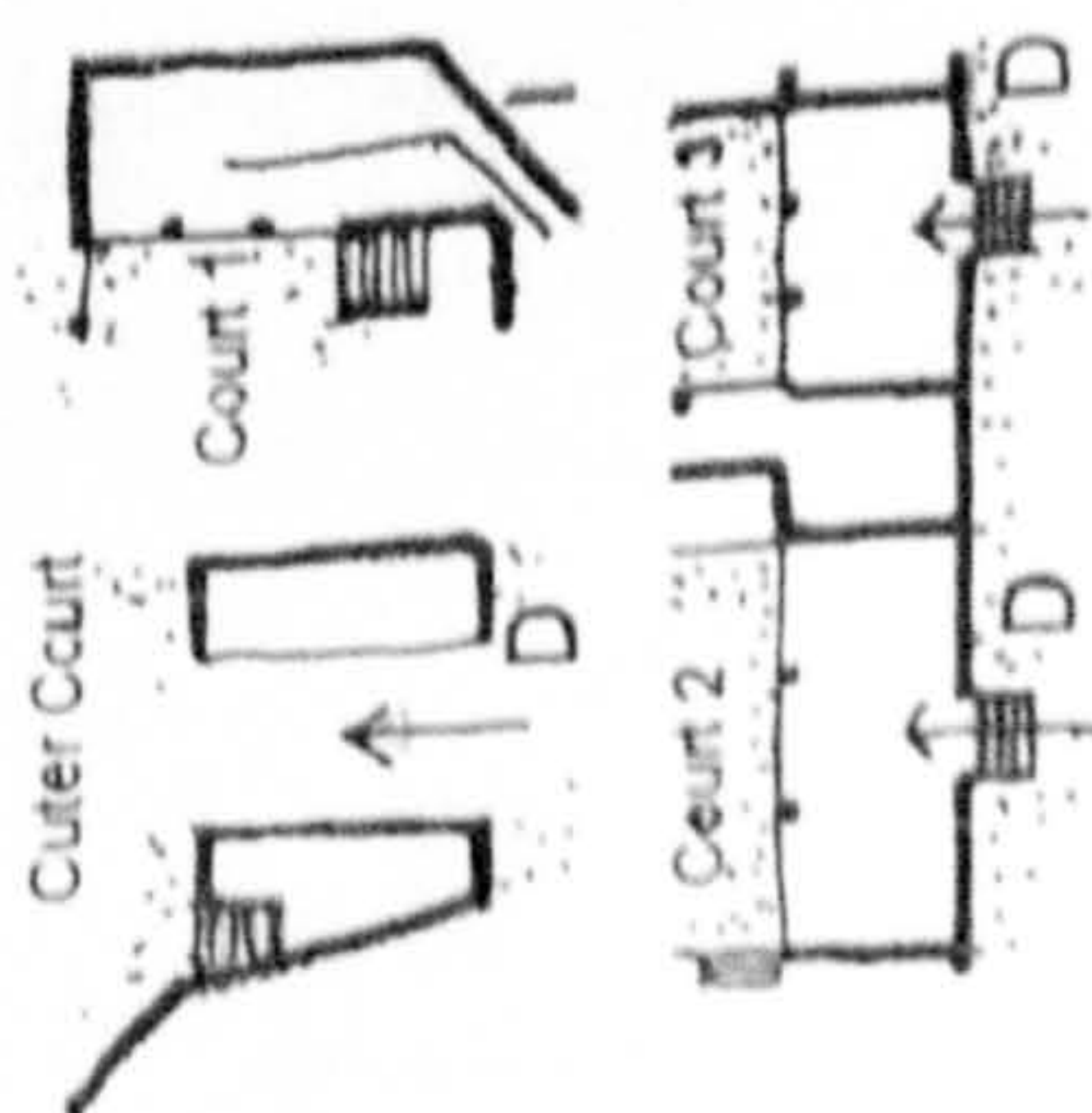
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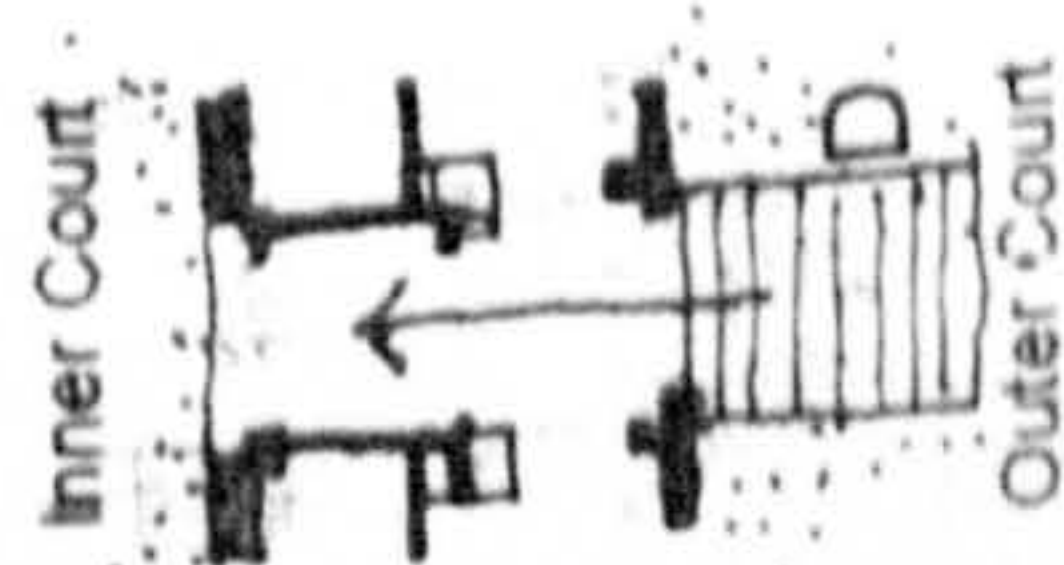
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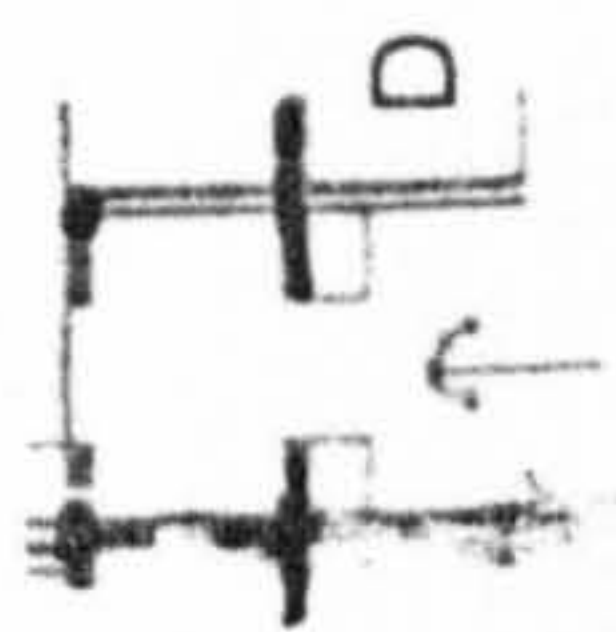
MARWARI



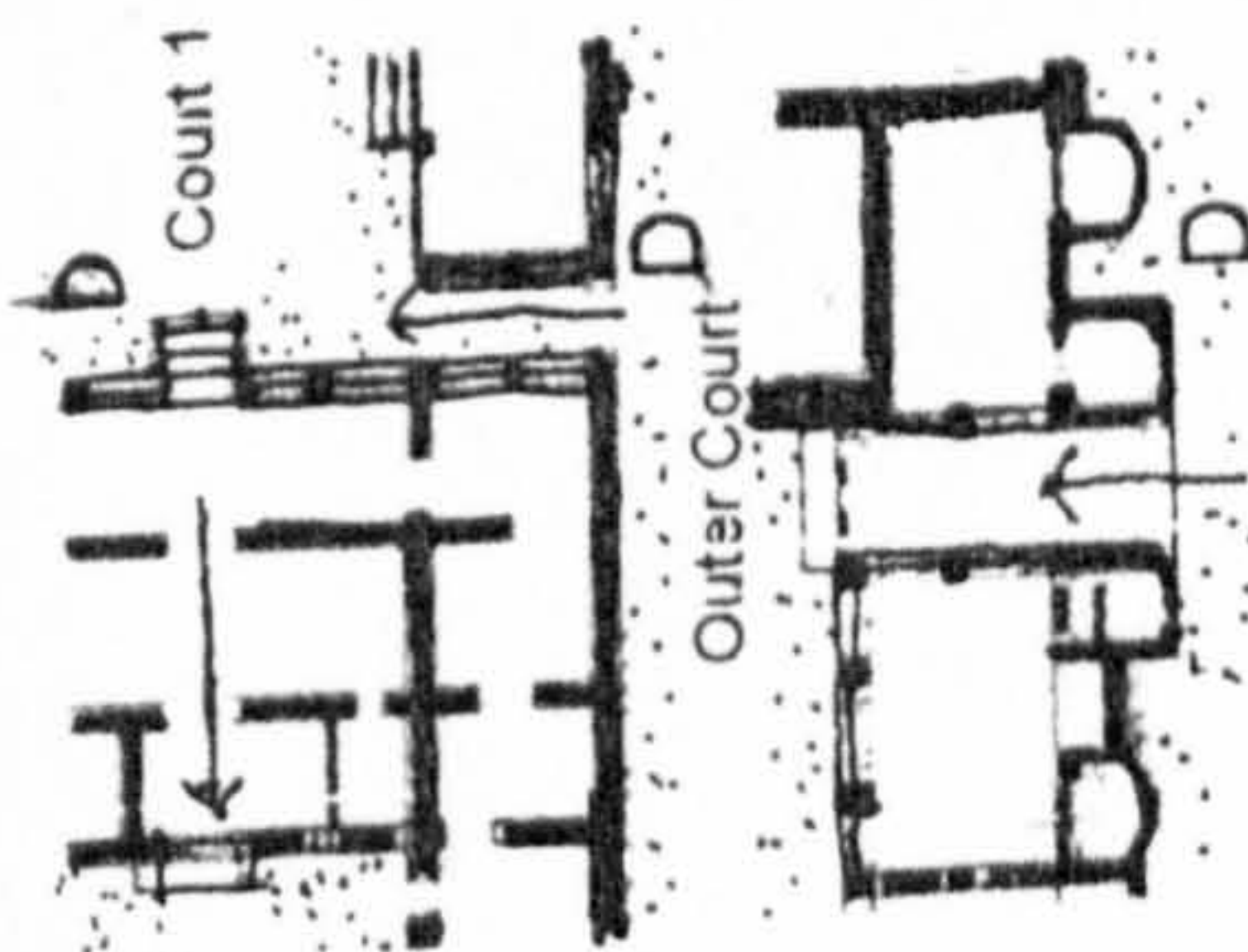
MUSLIM  
OTHERS



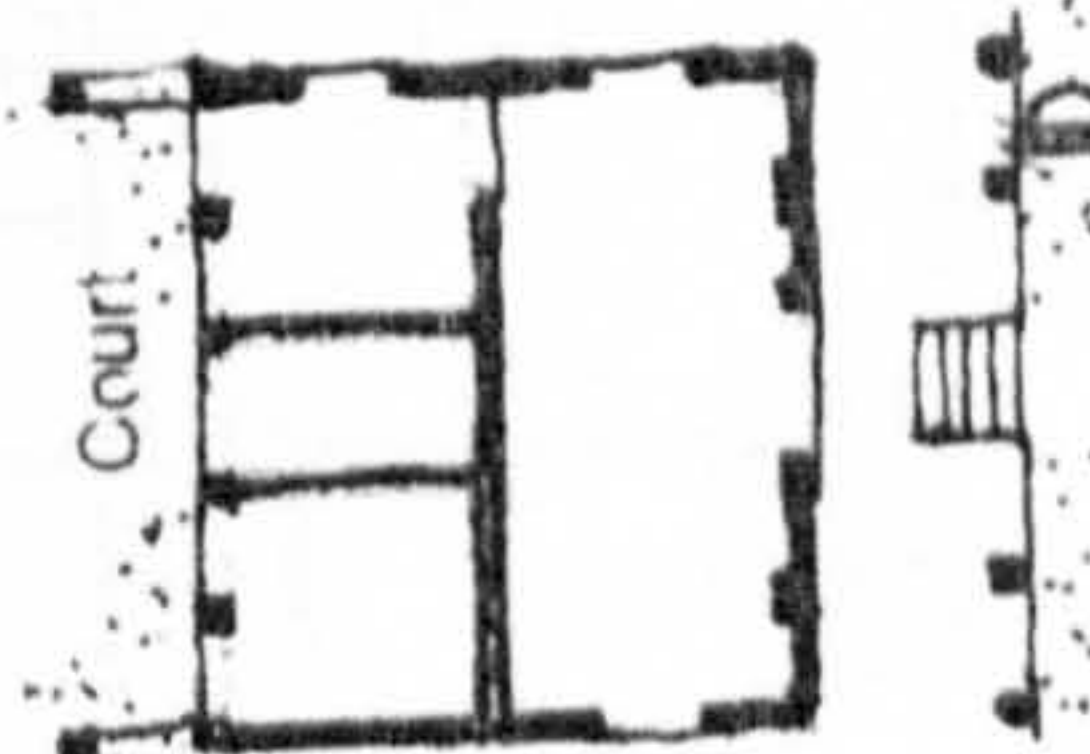
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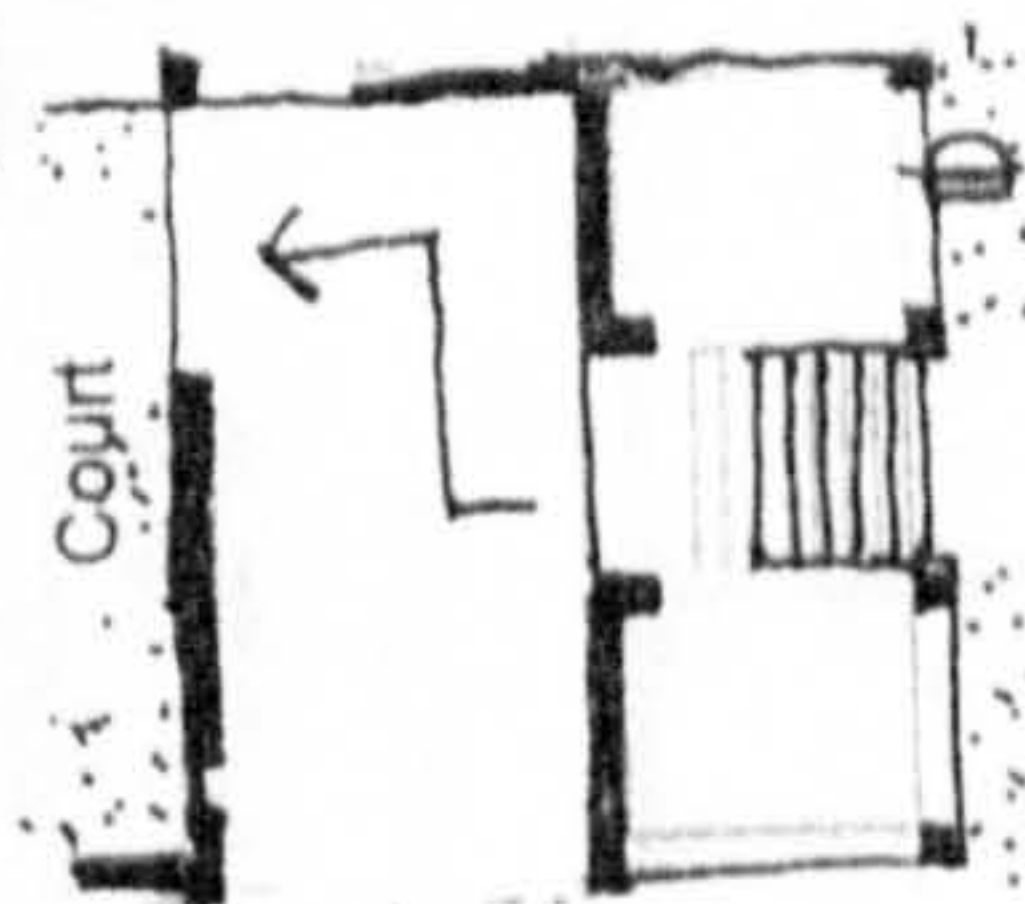
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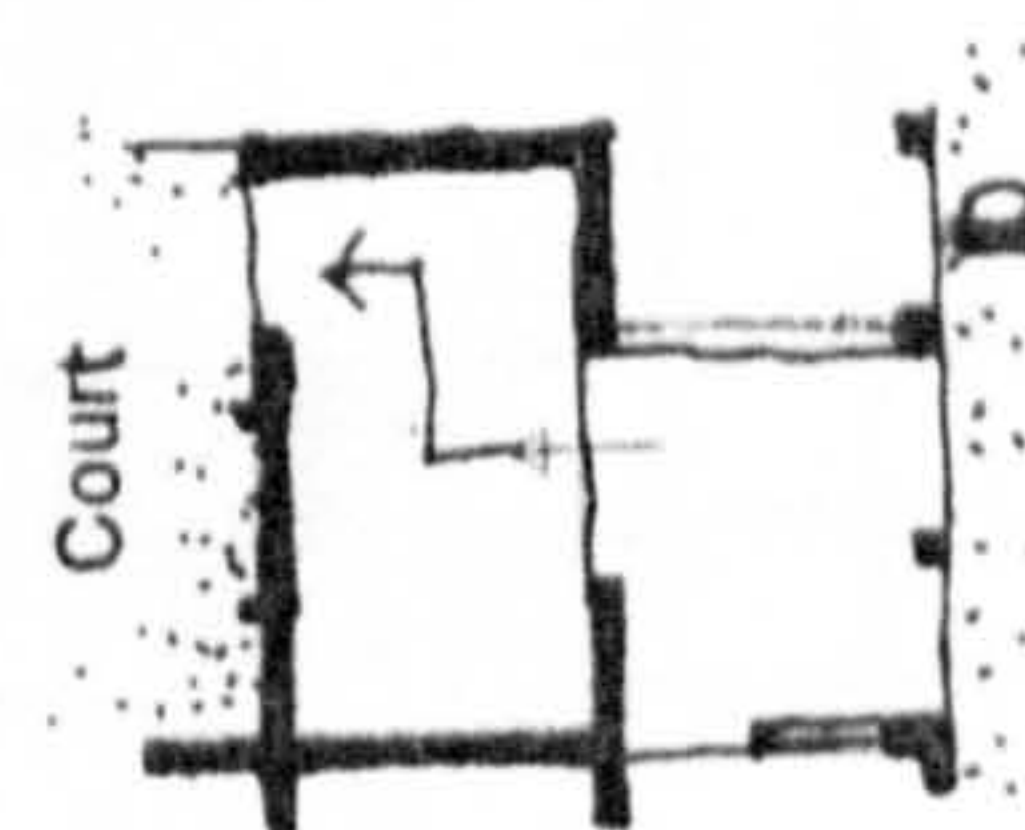
Court



Court



Court





# ENTRANCES - MERWARA REGION

DIRECT - D INDIRECT - I

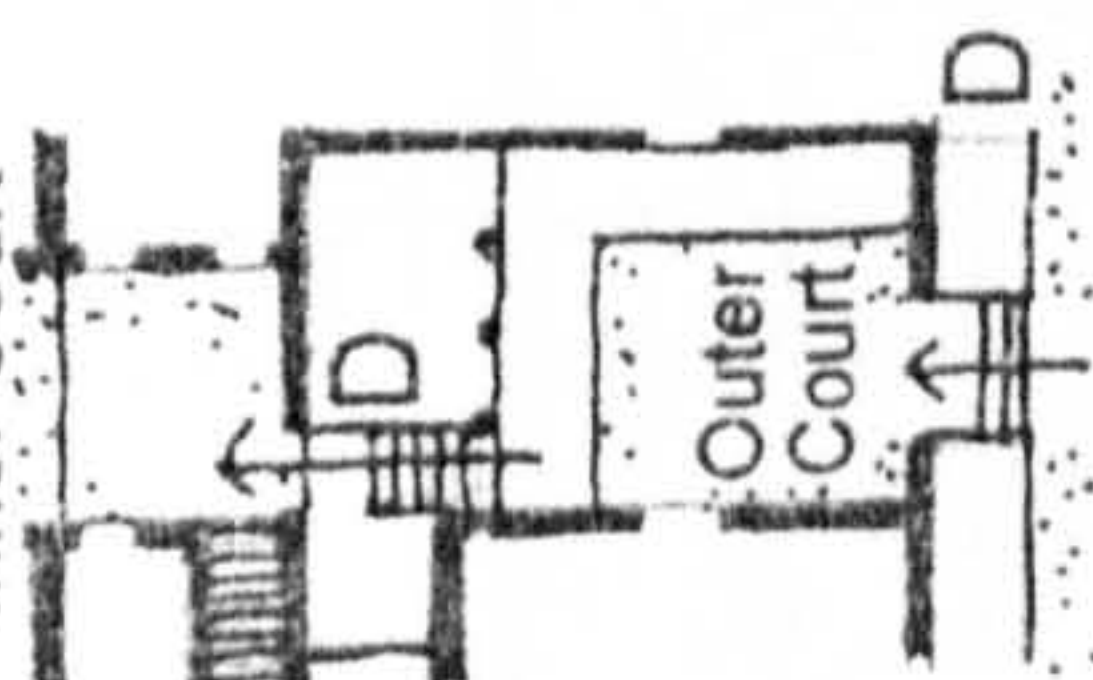
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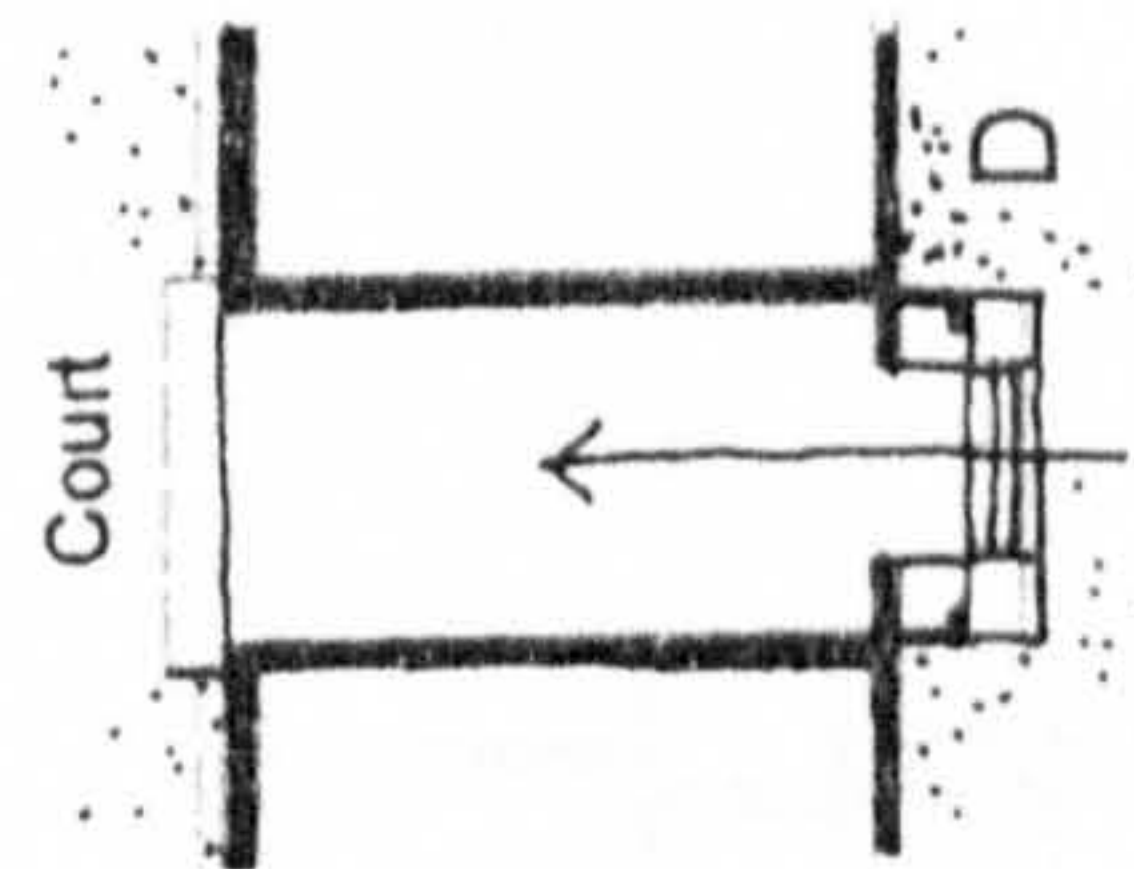
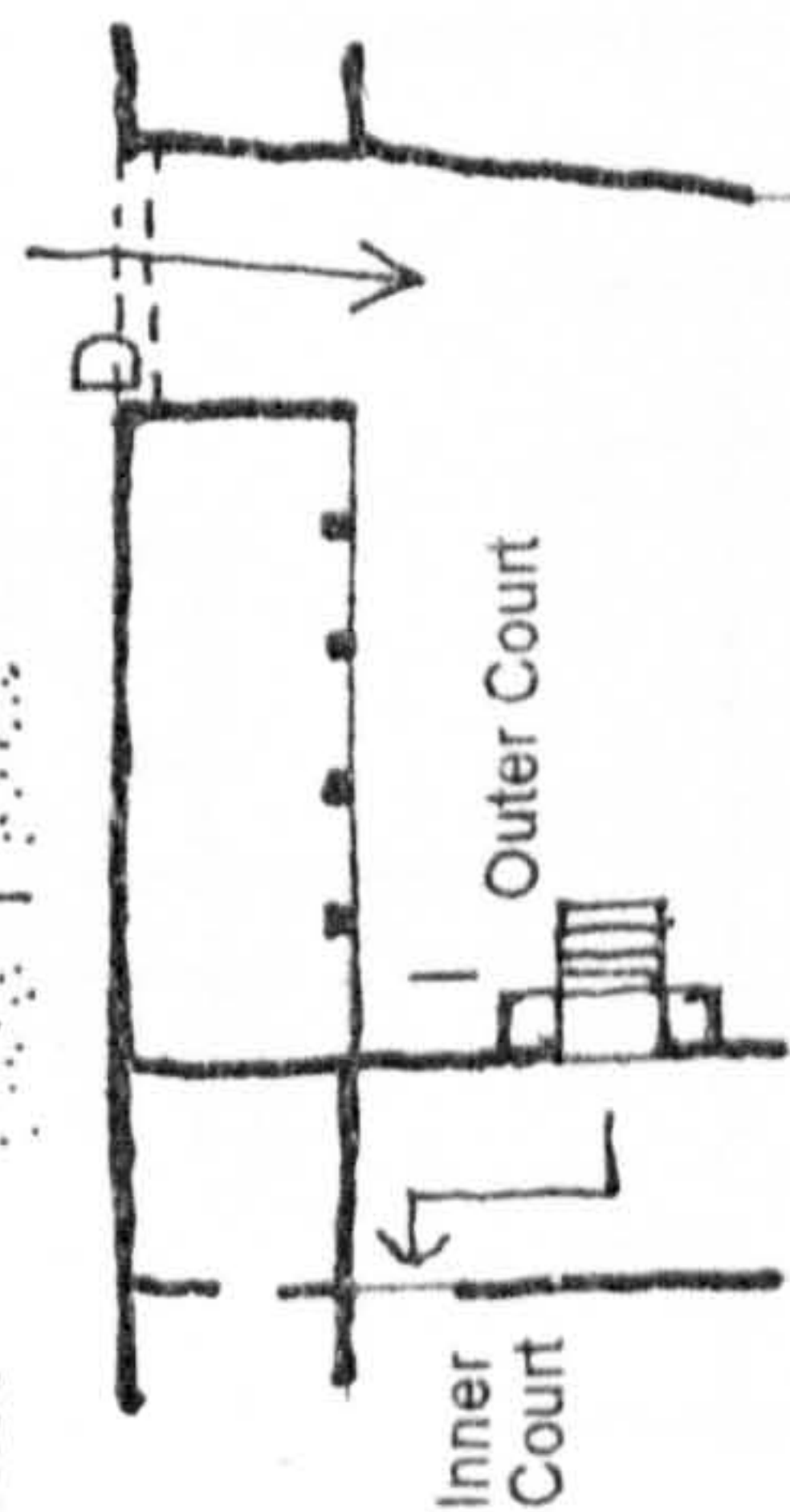
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CASTE

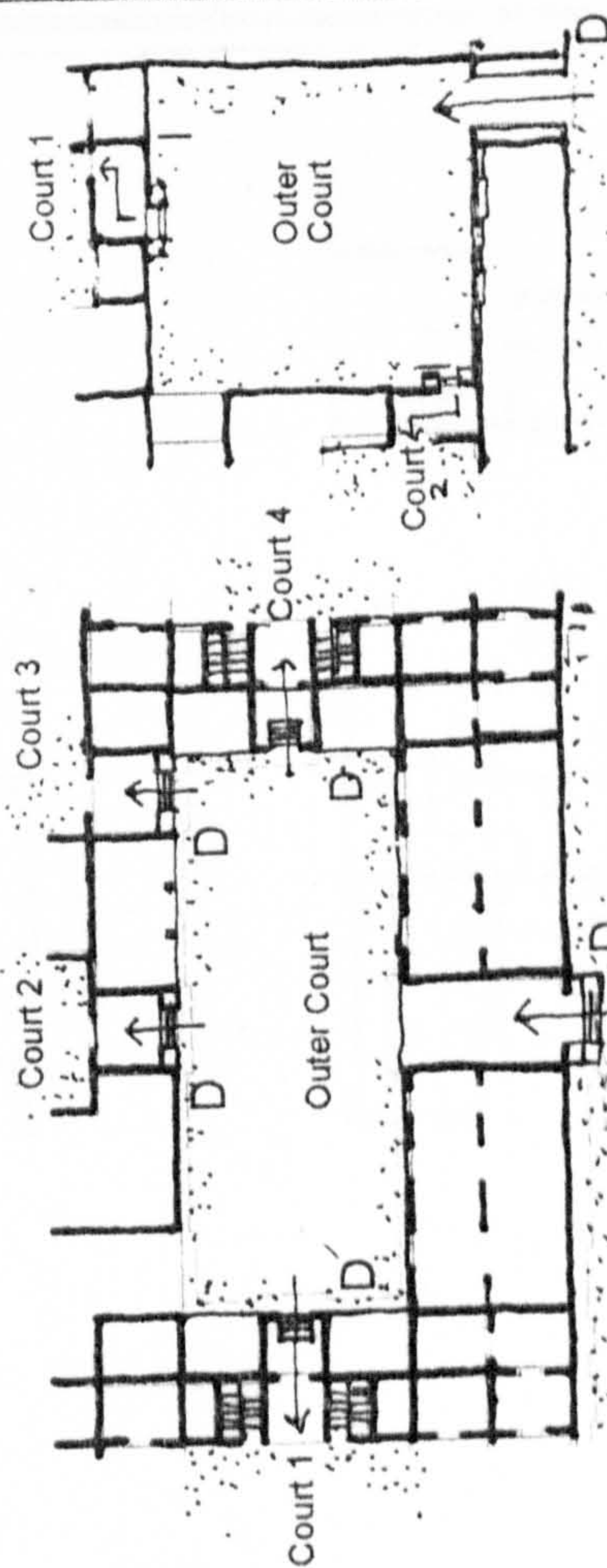
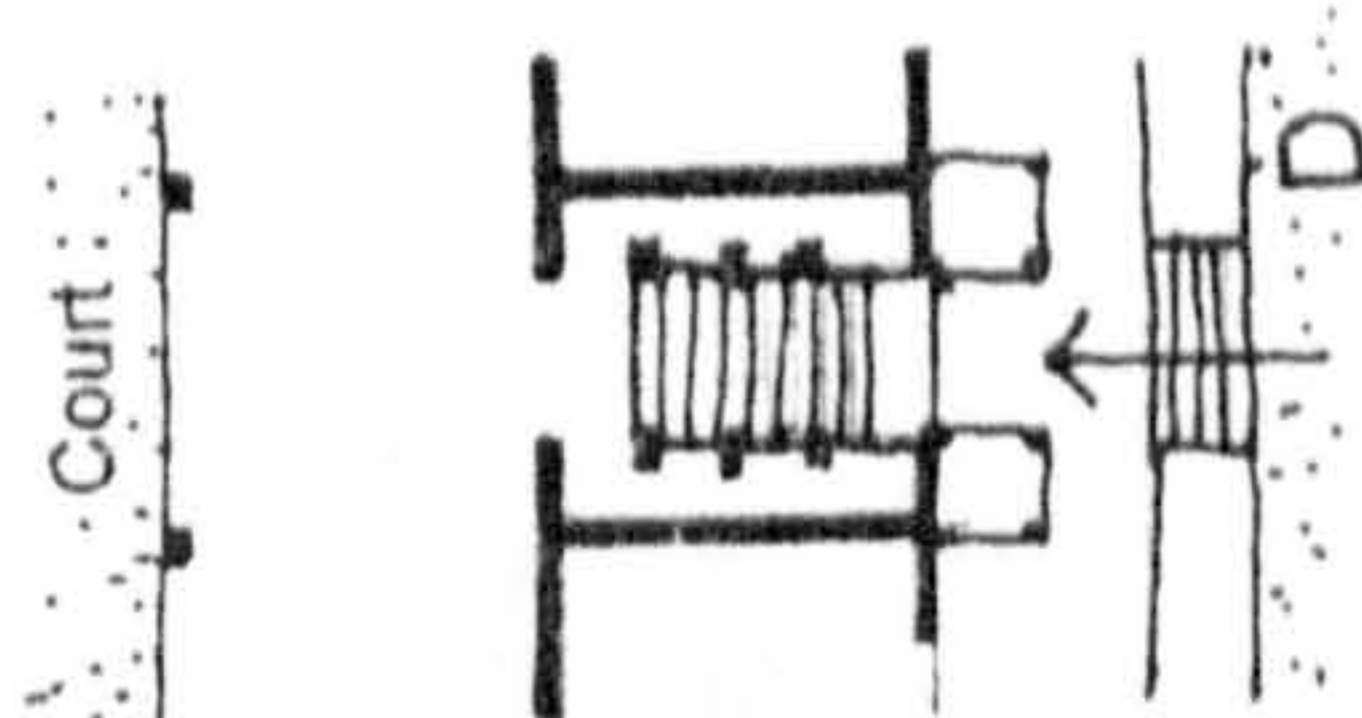
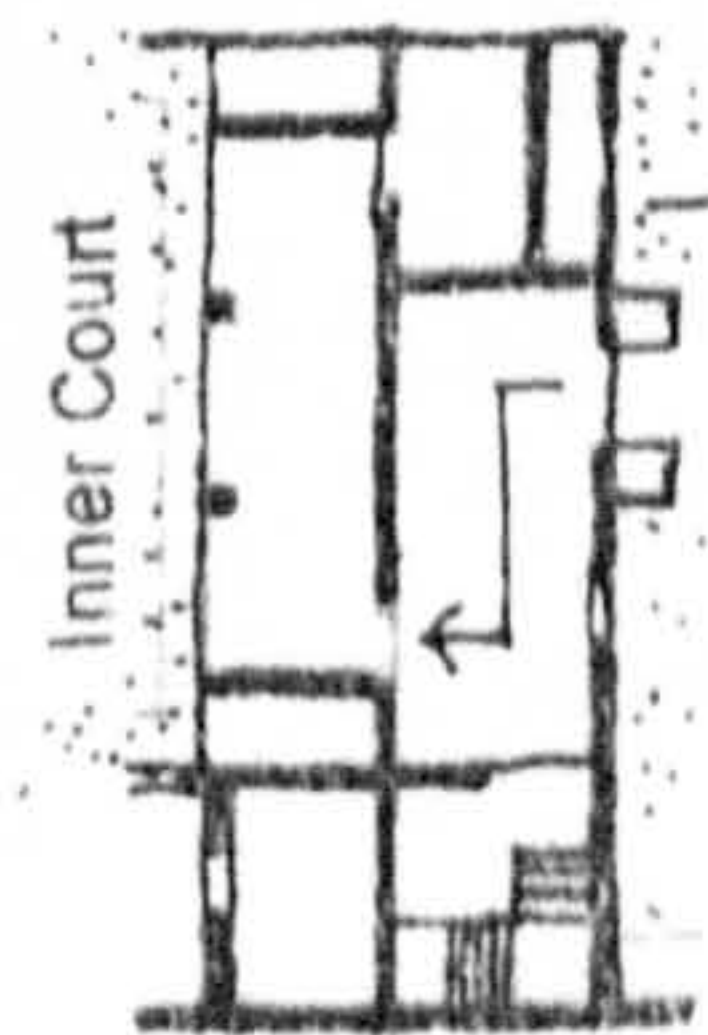
Inner Court



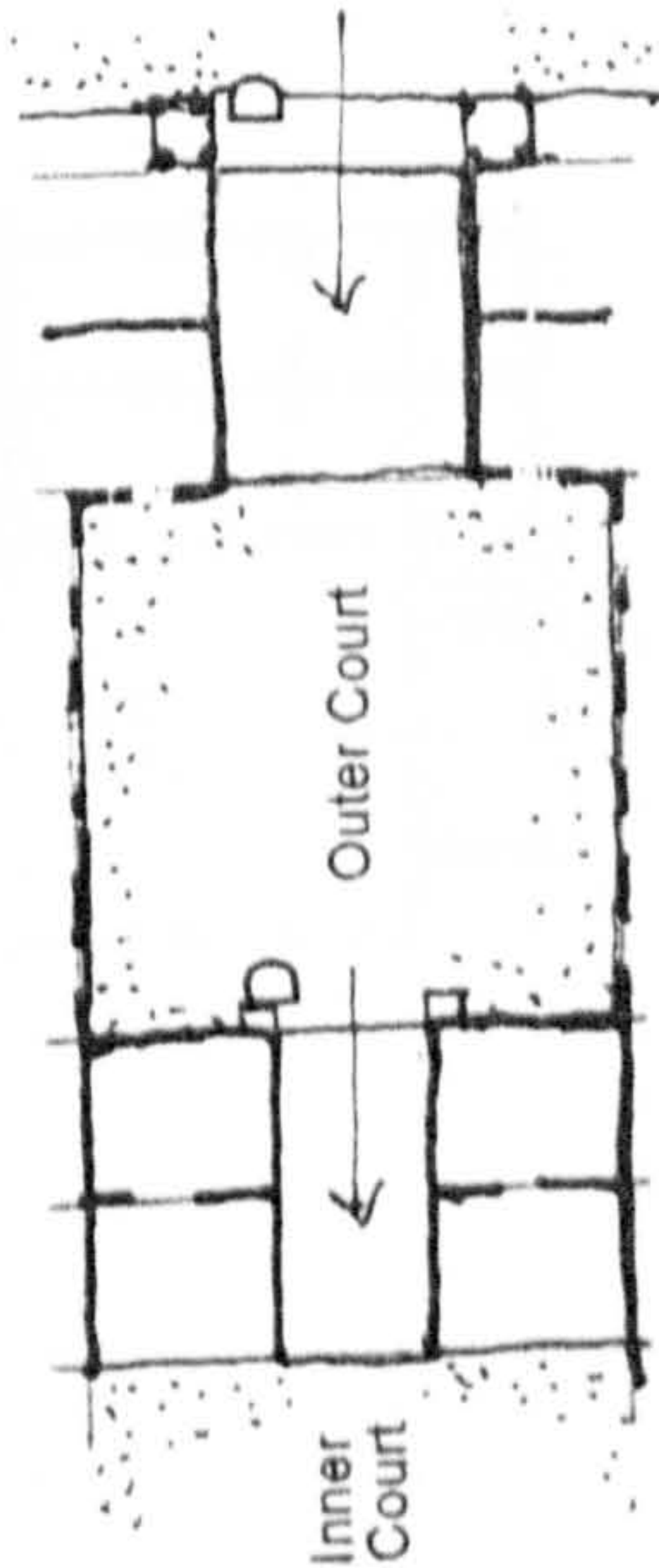
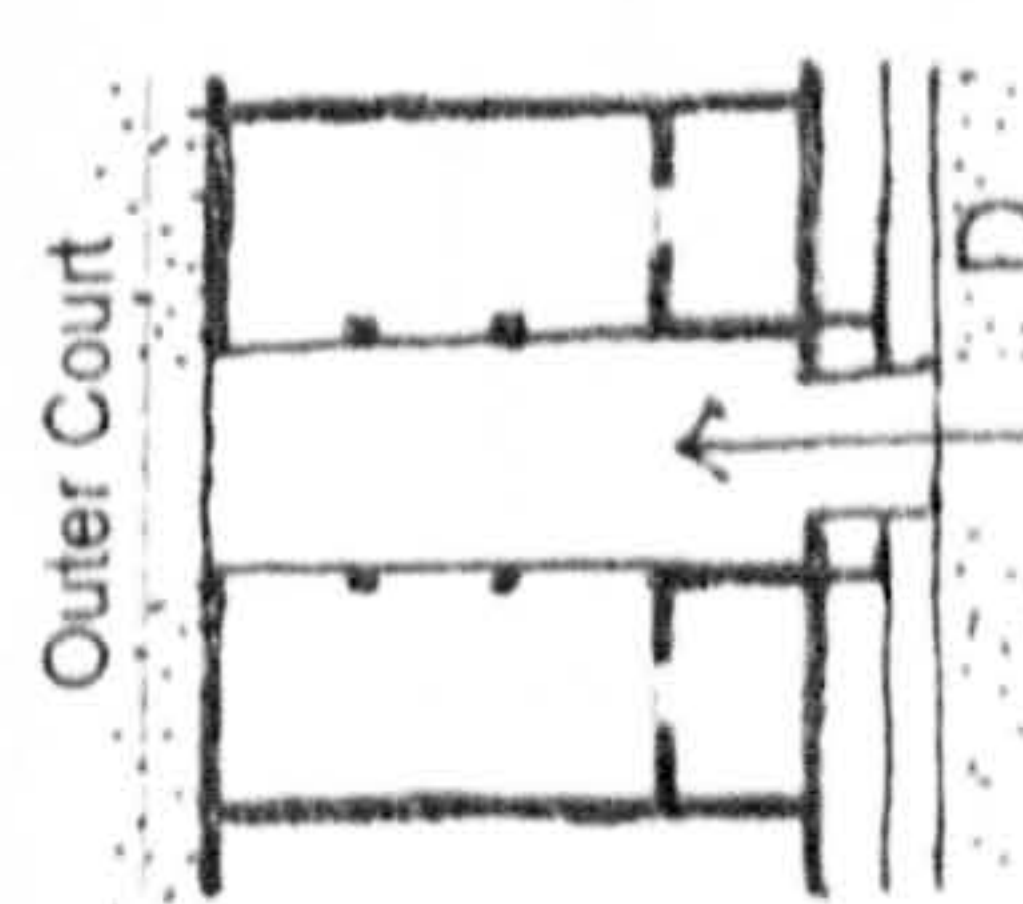
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RAJPUT

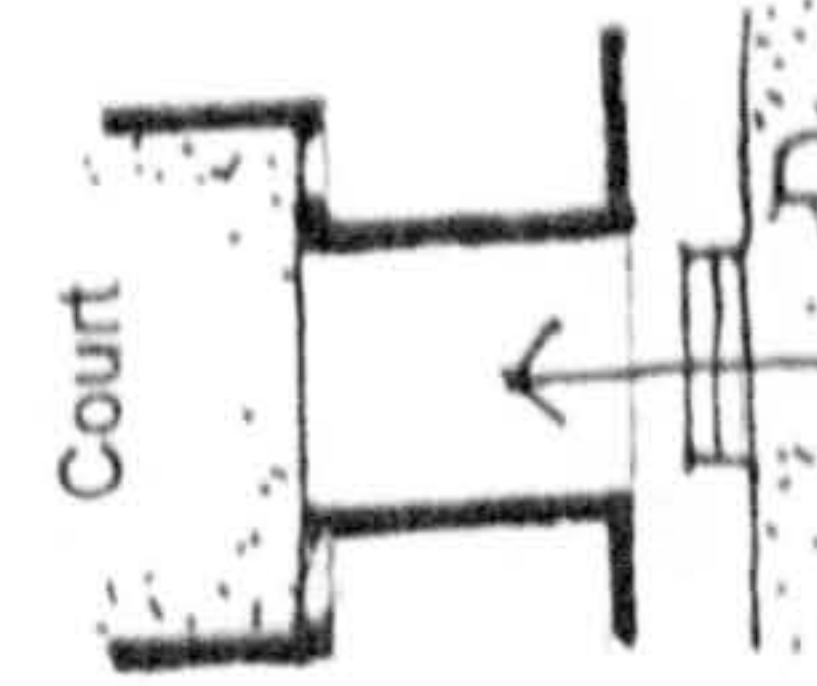
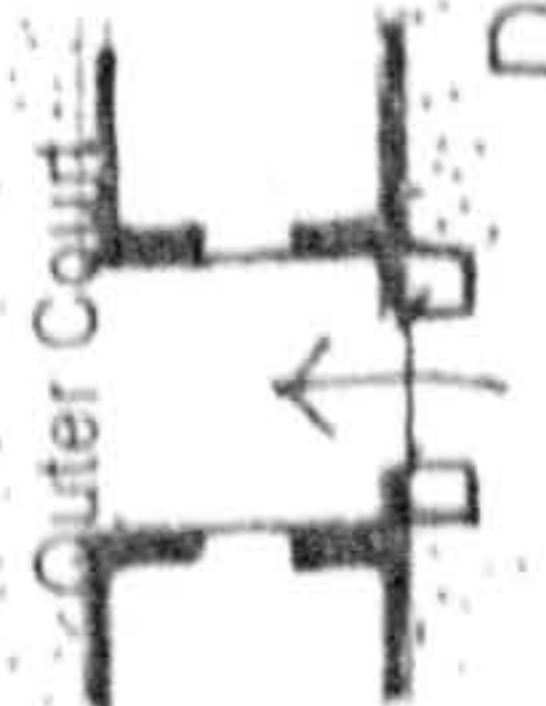


MARWARI



MUSLIM

OTHERS





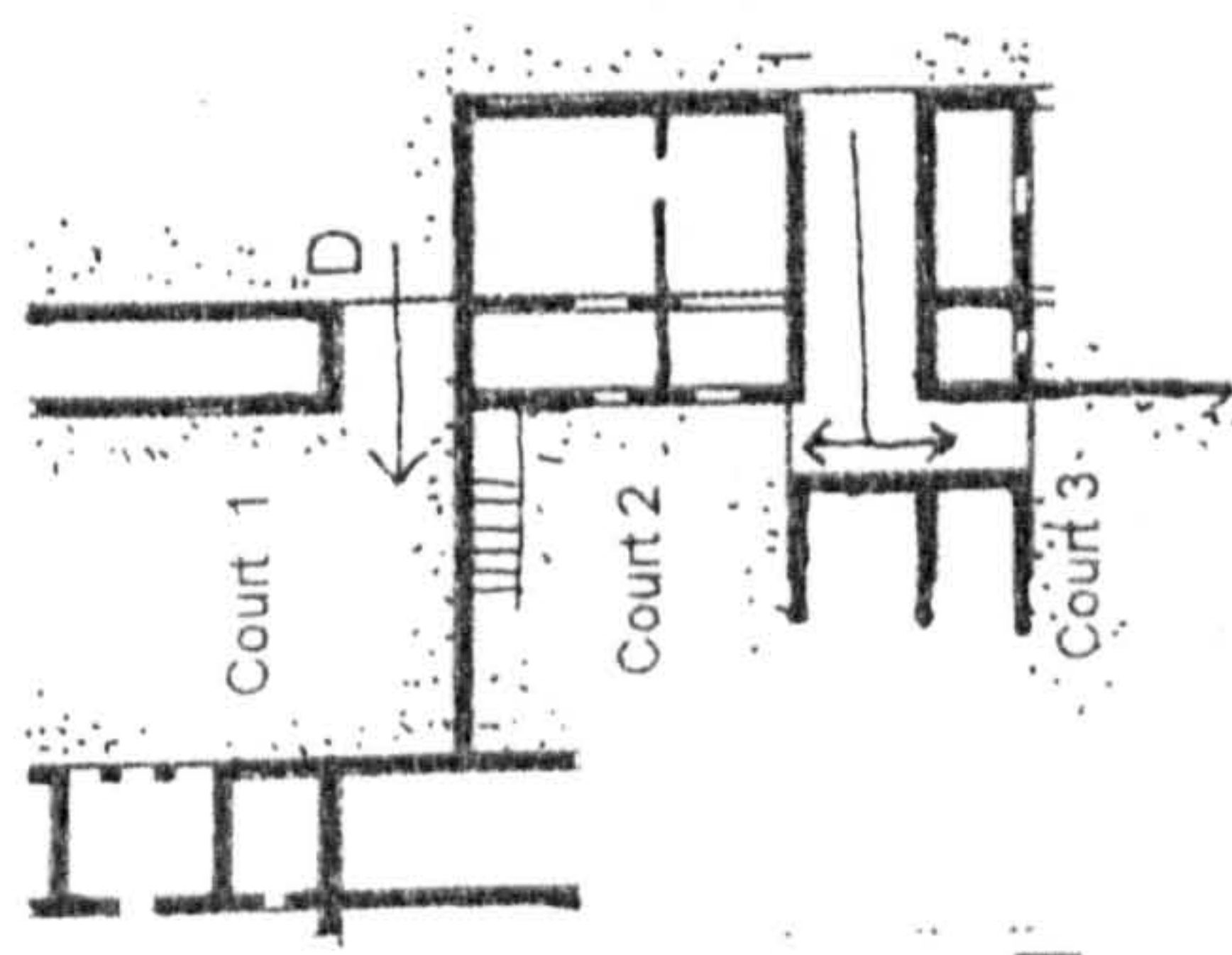
TOWNS

UDAIPUR

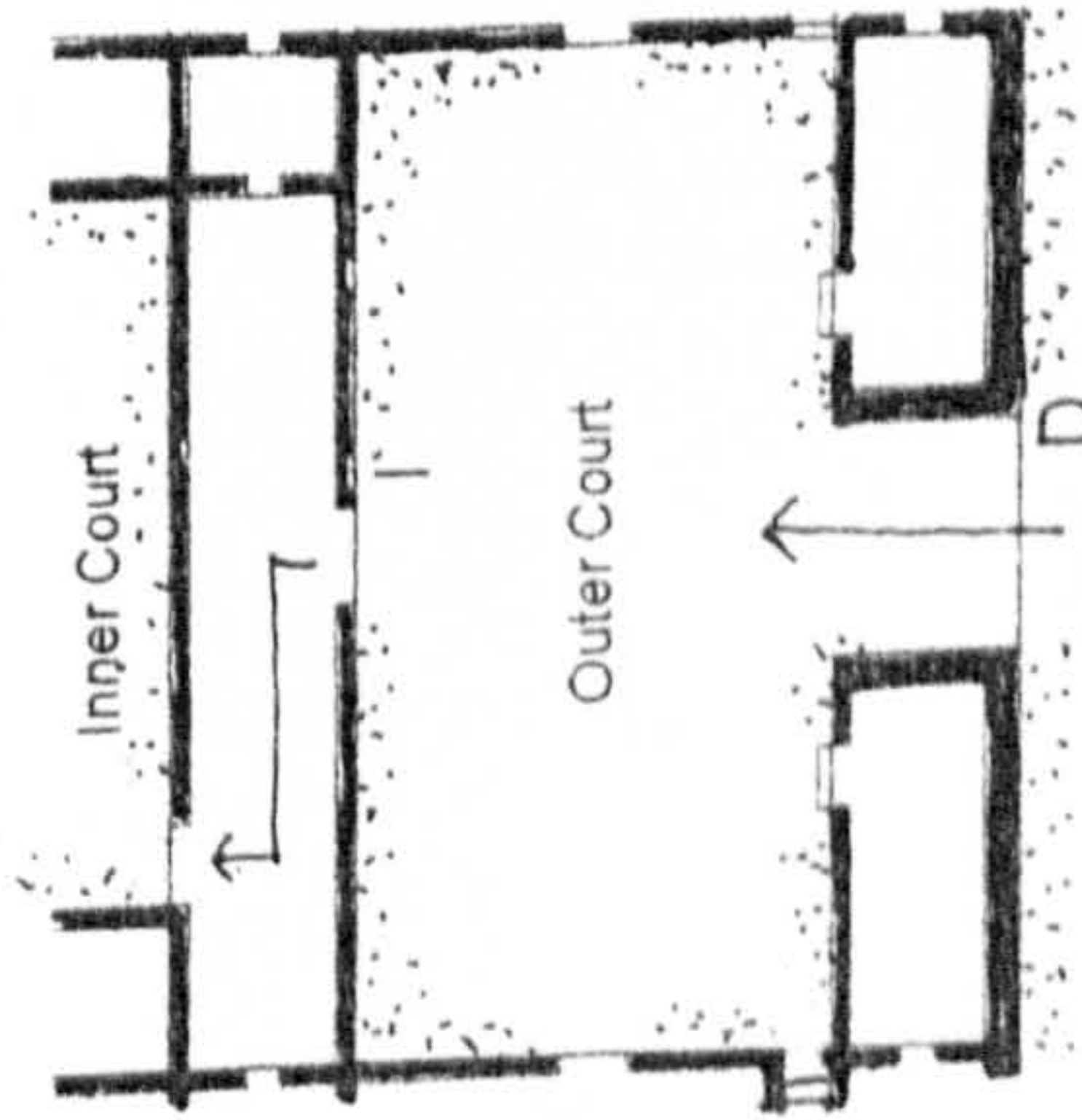
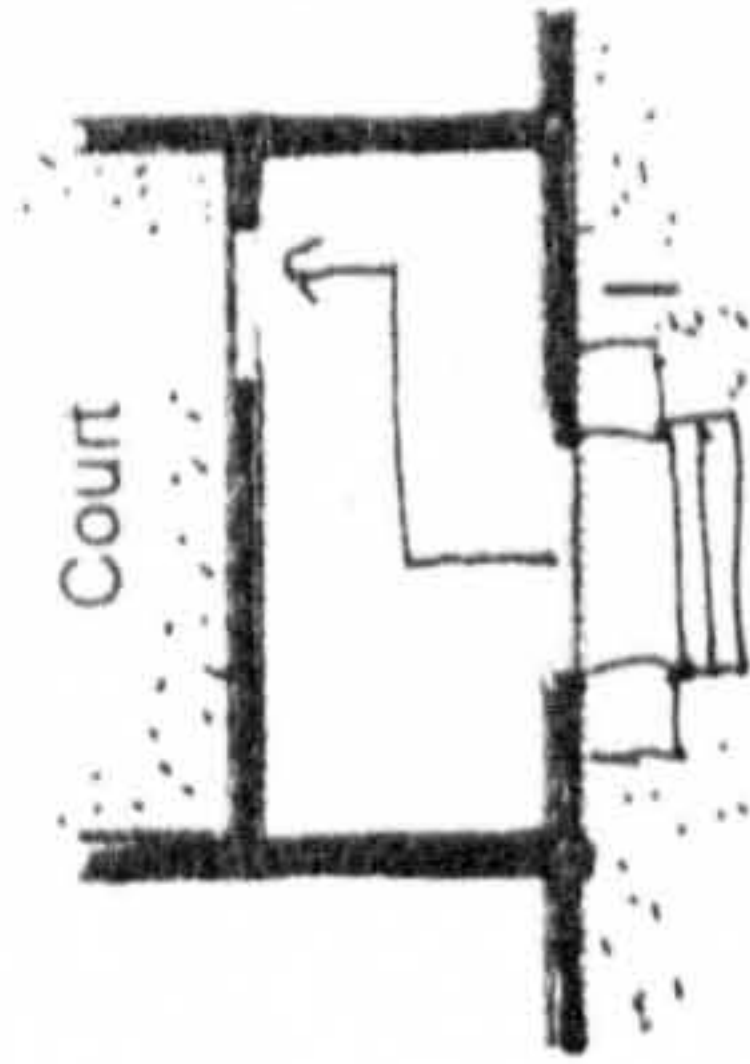
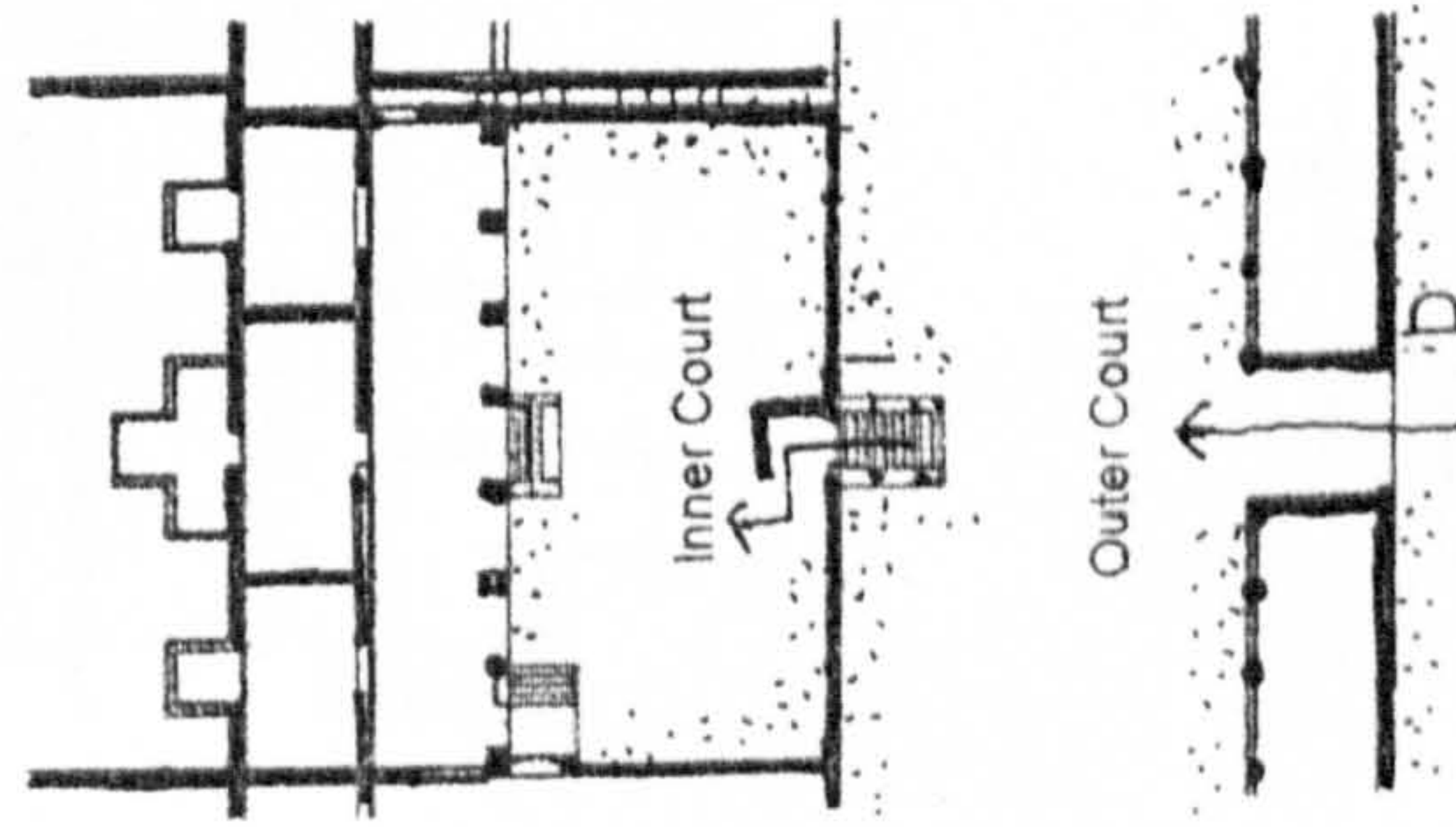
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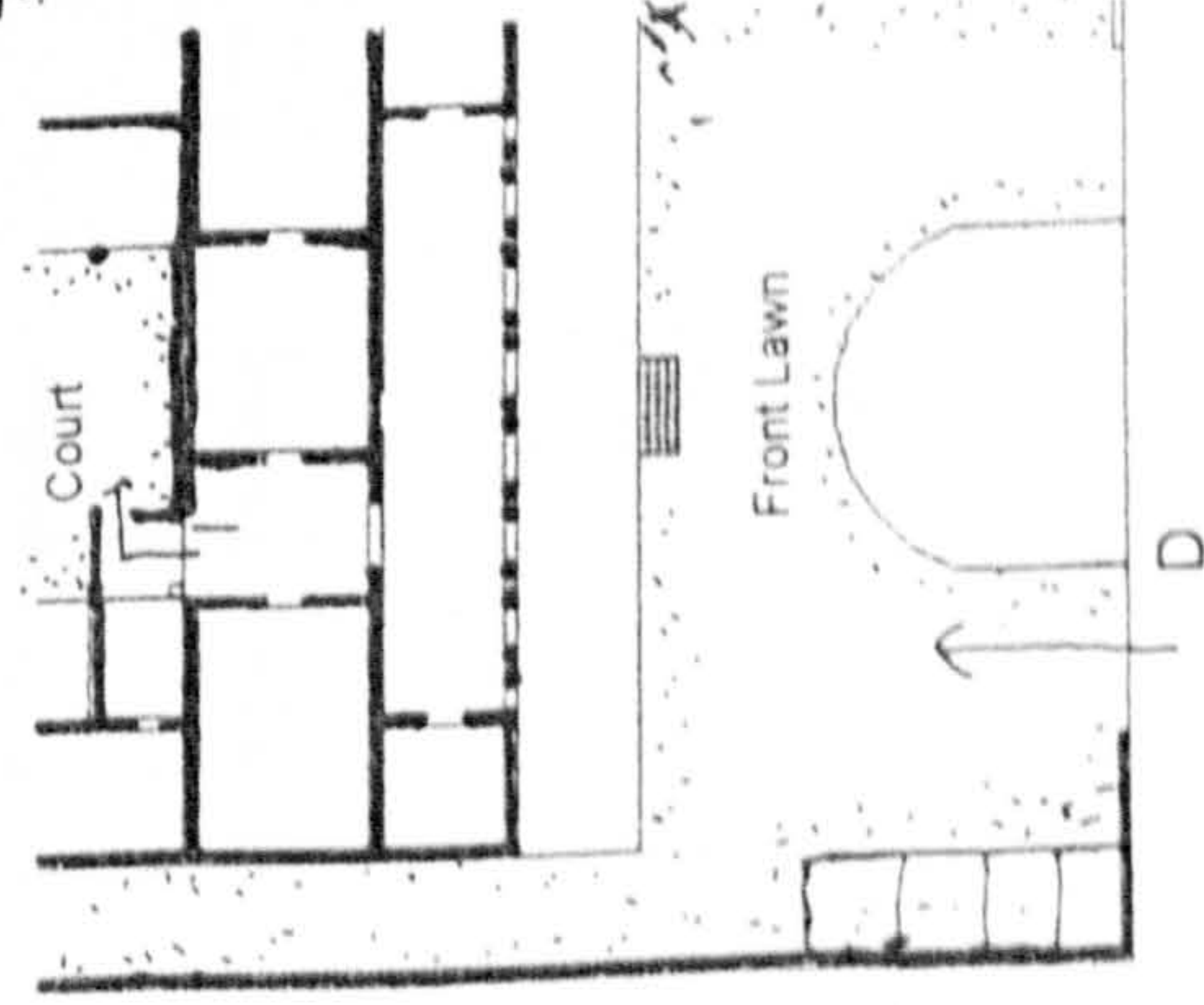
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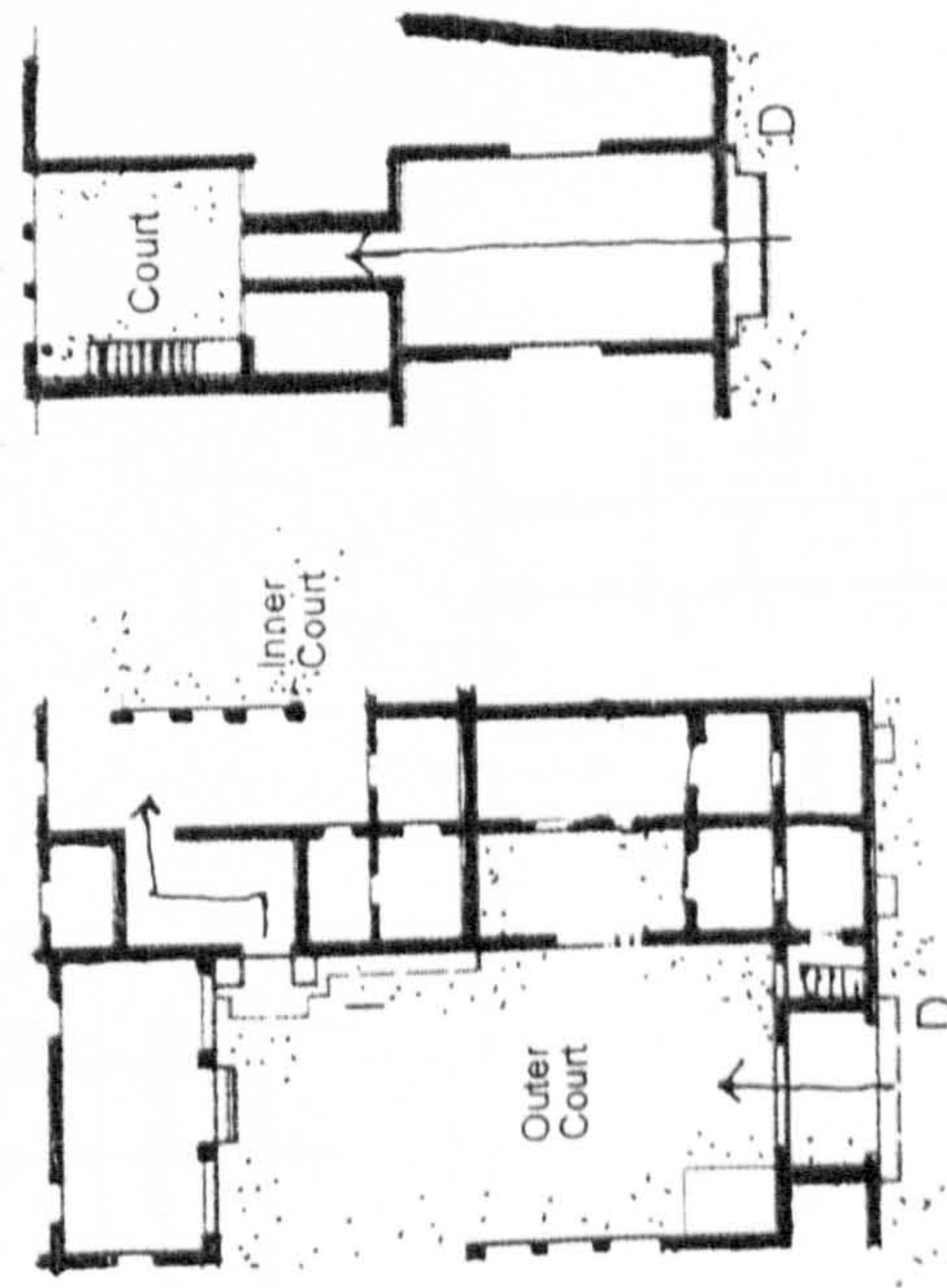
BRAHMIN



RAJPUT



MARWARI

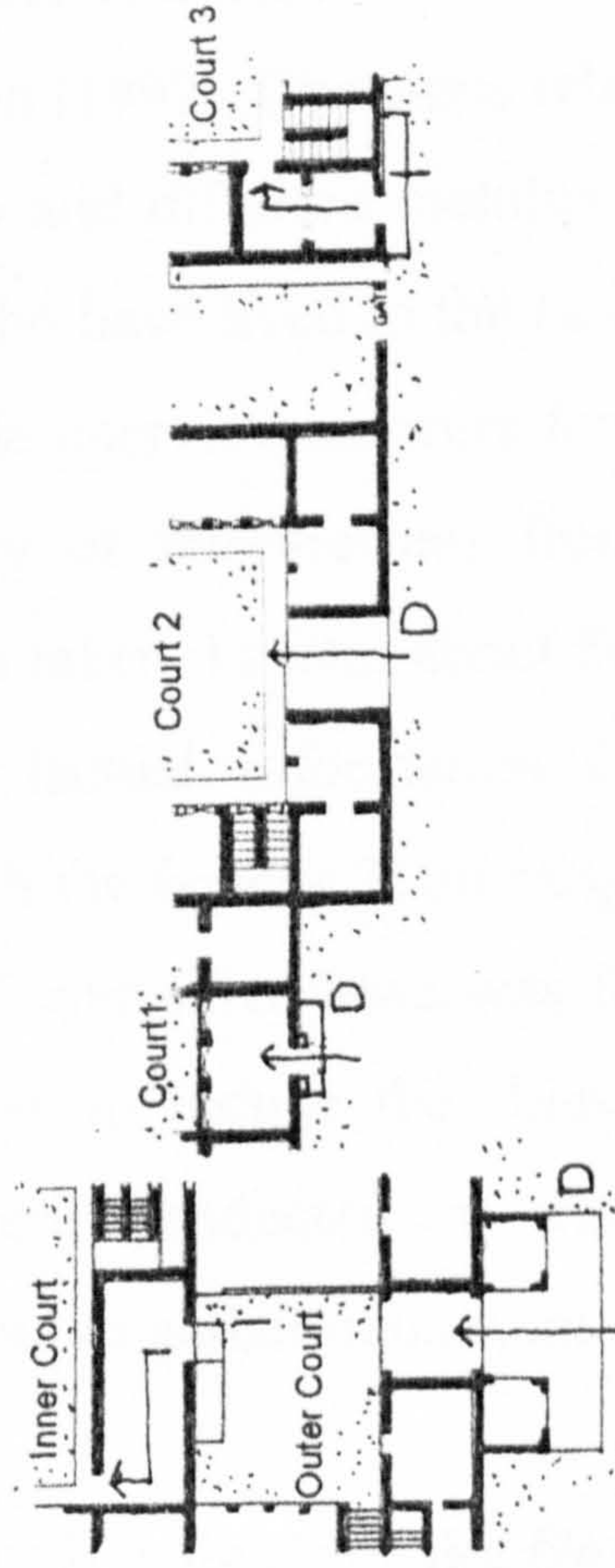
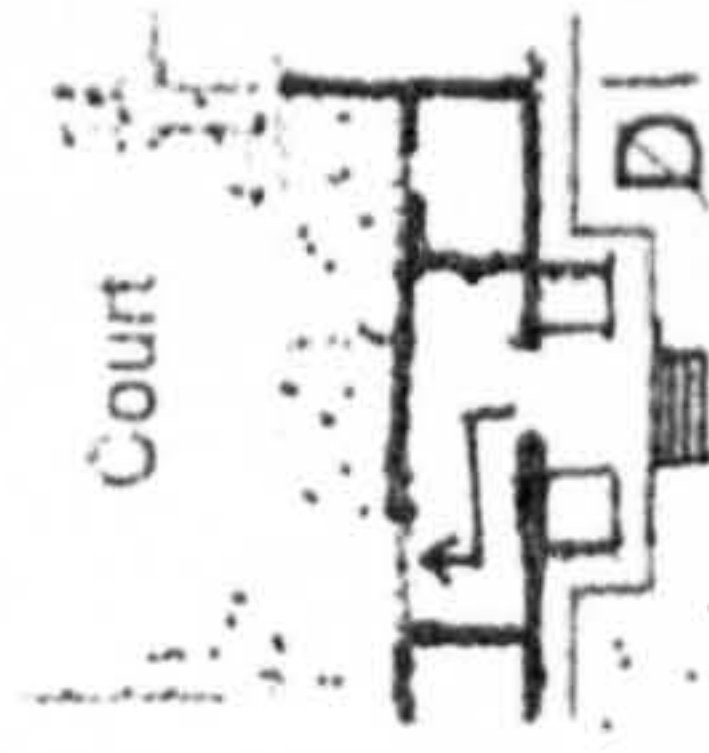




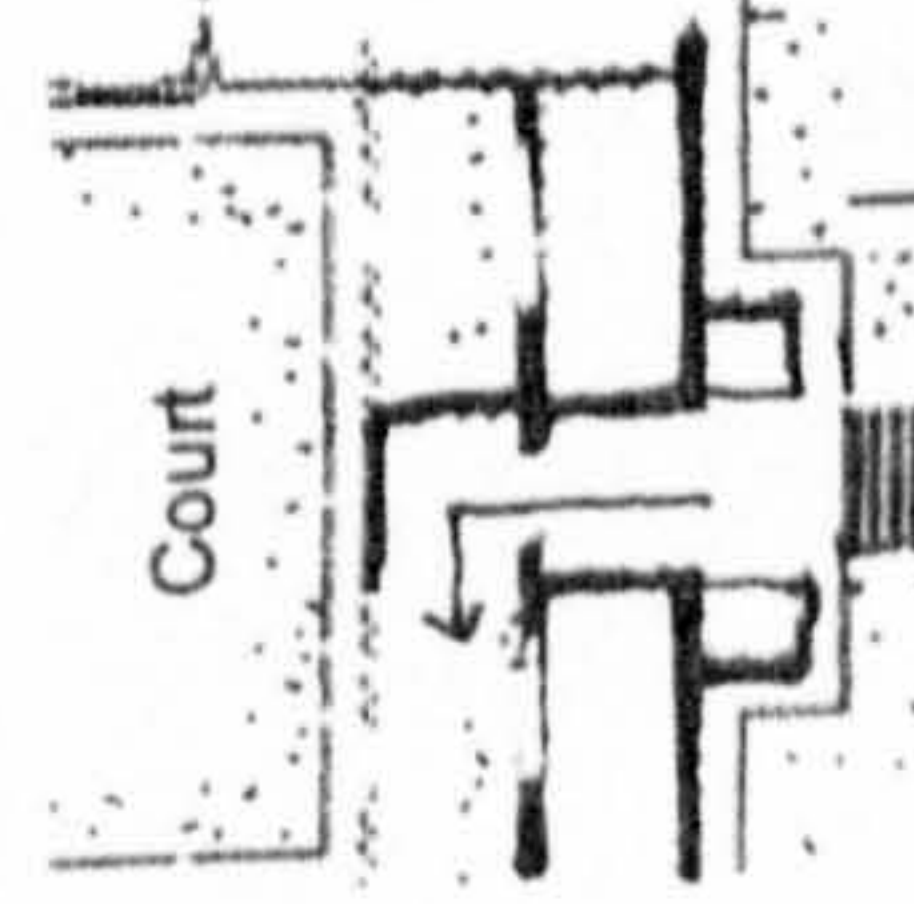
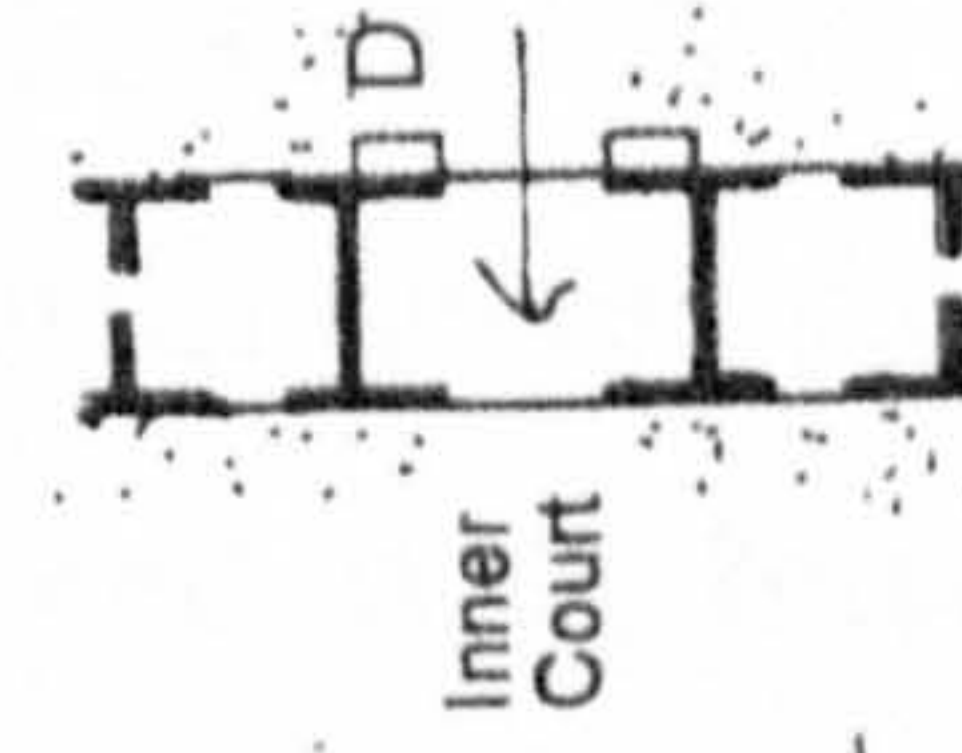
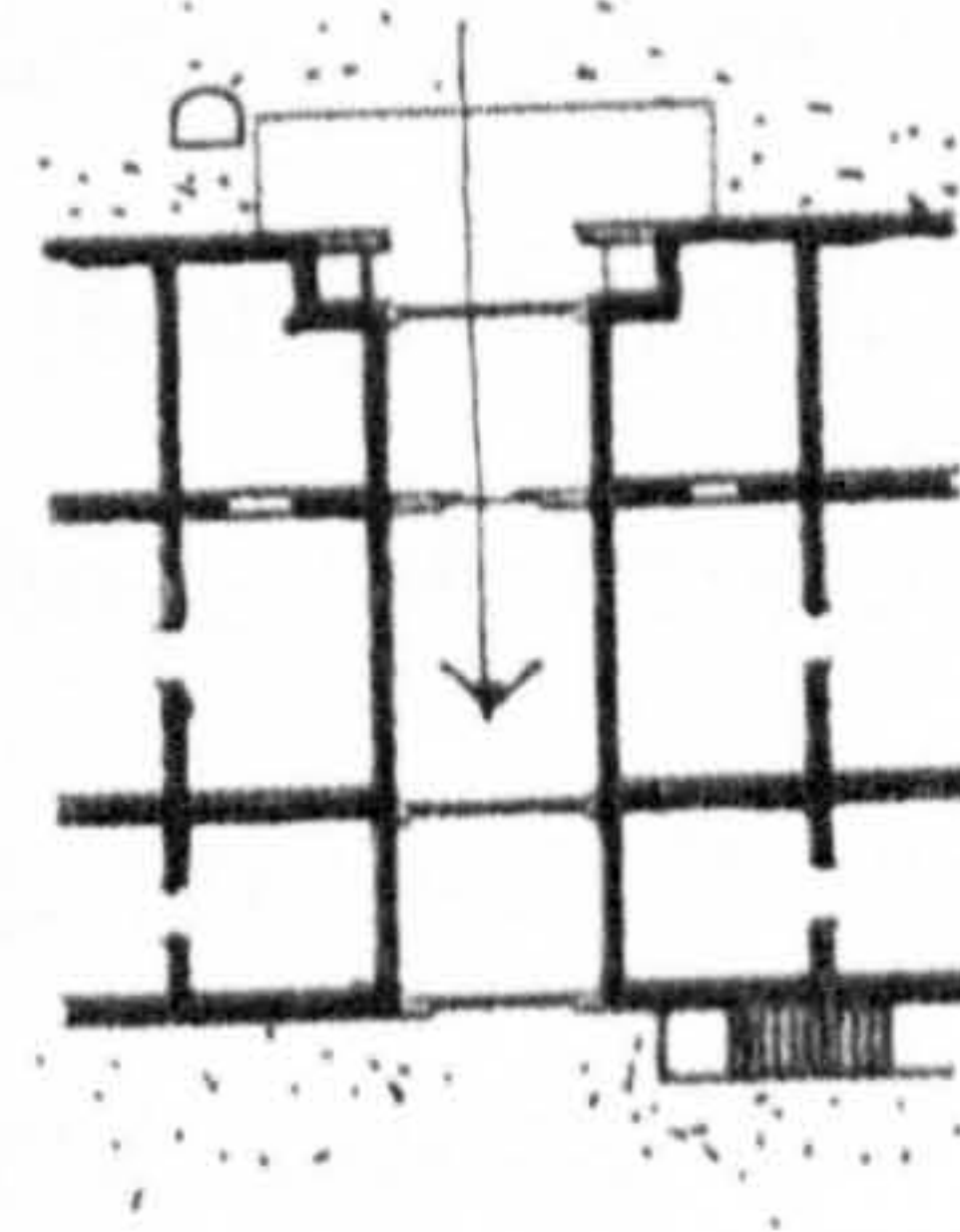
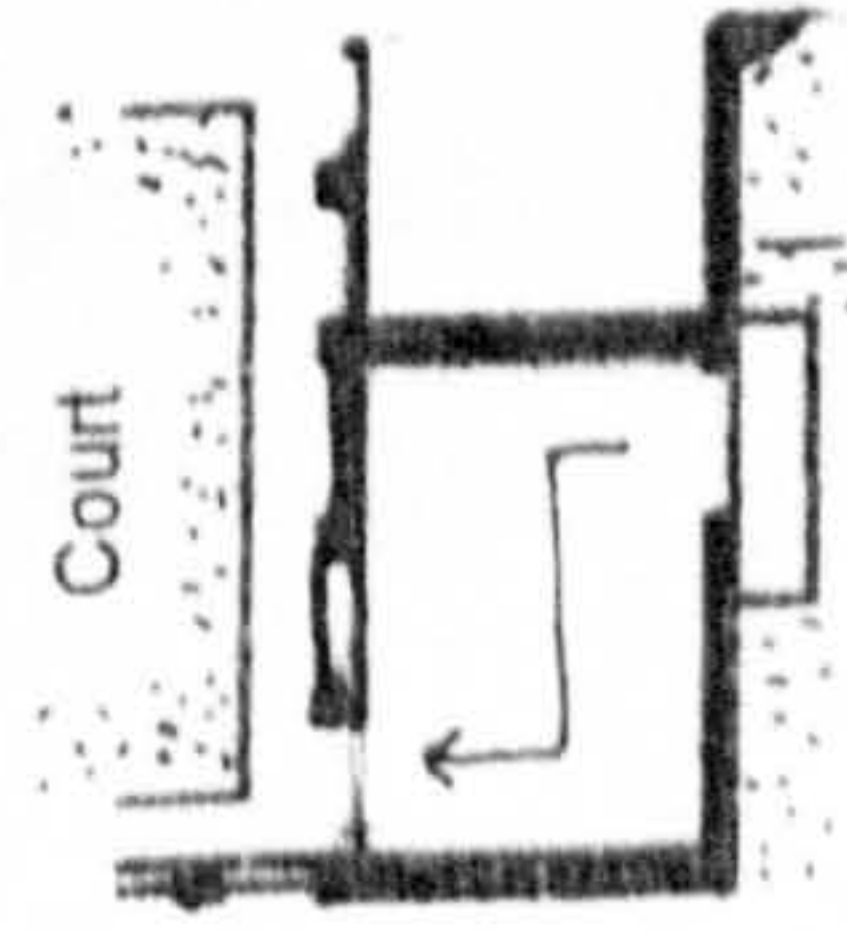
TOWNS TIJARA AND RAJGARH ALWAR  
CASTE

SAWAIMADHOPUR / TONK

BRAHMIN



RAJPUT

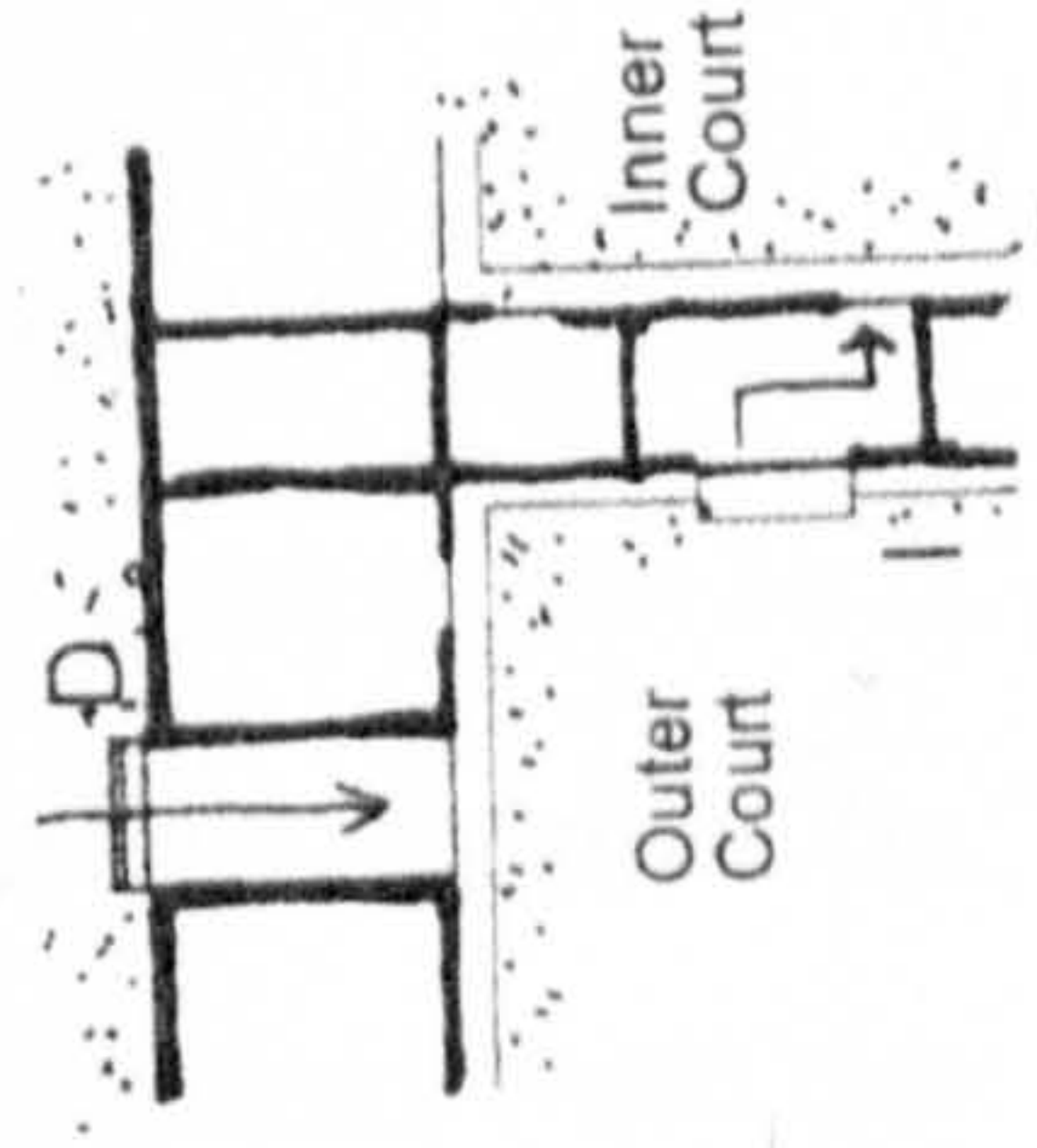
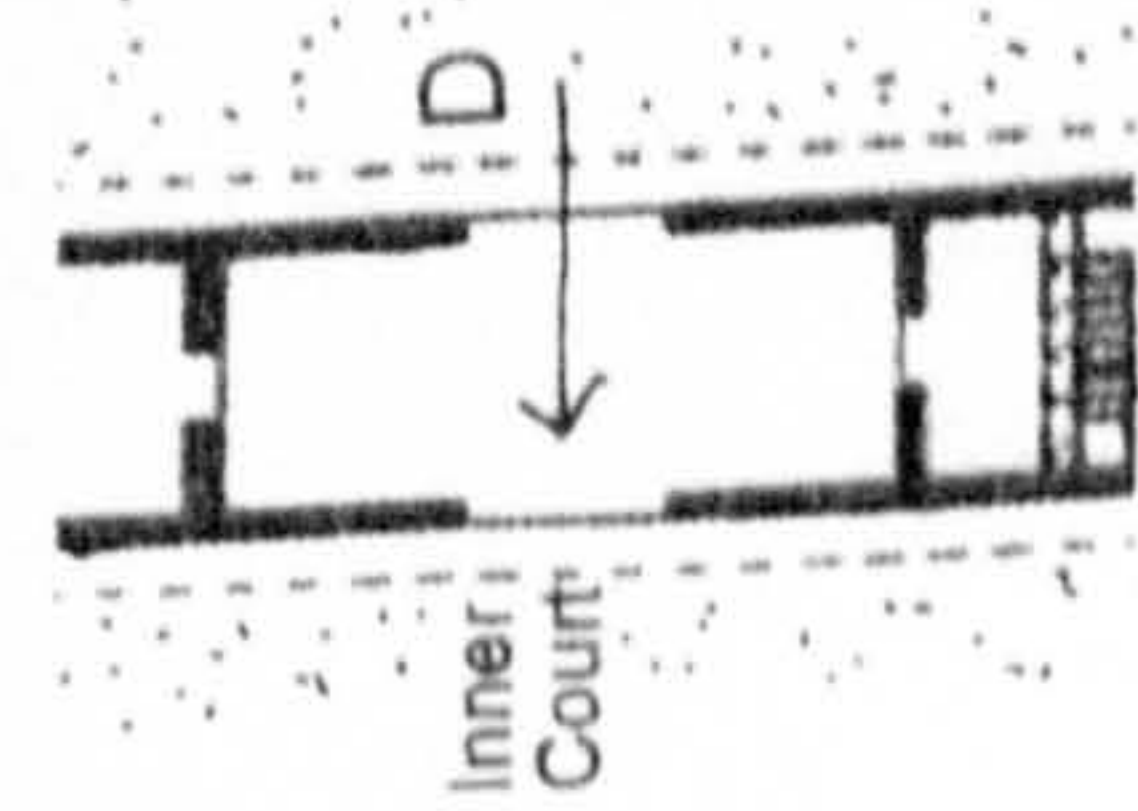
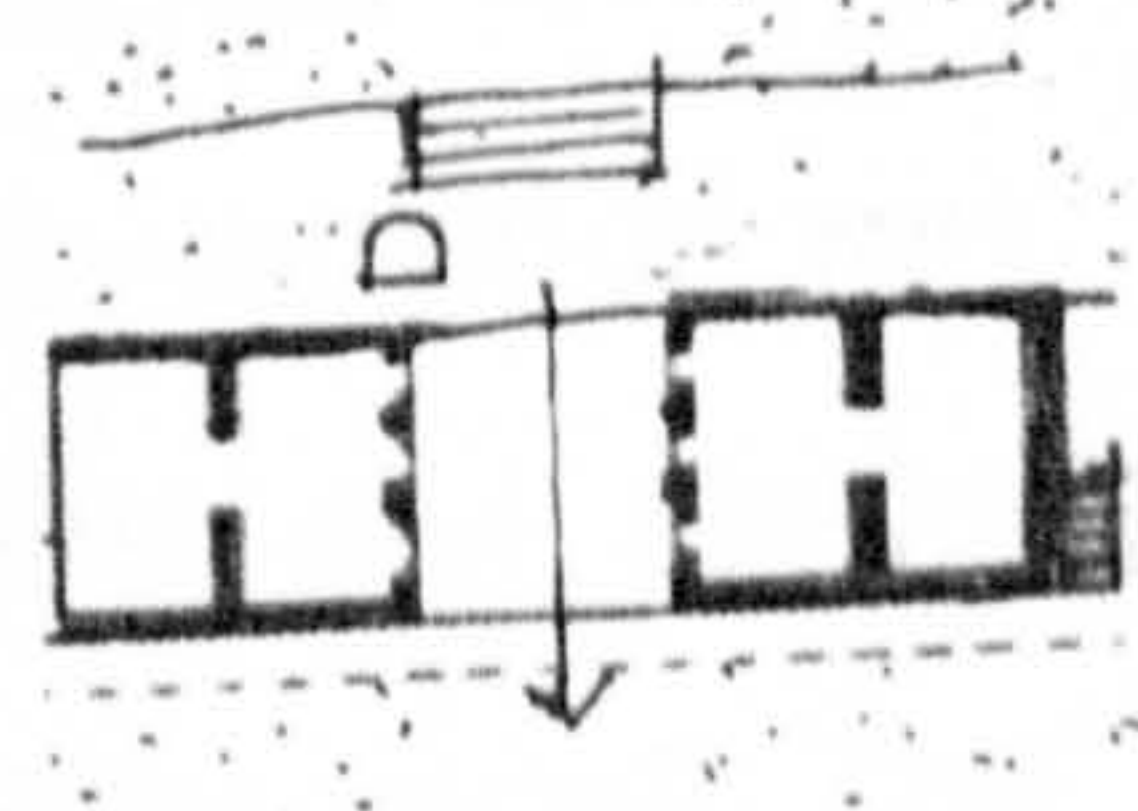
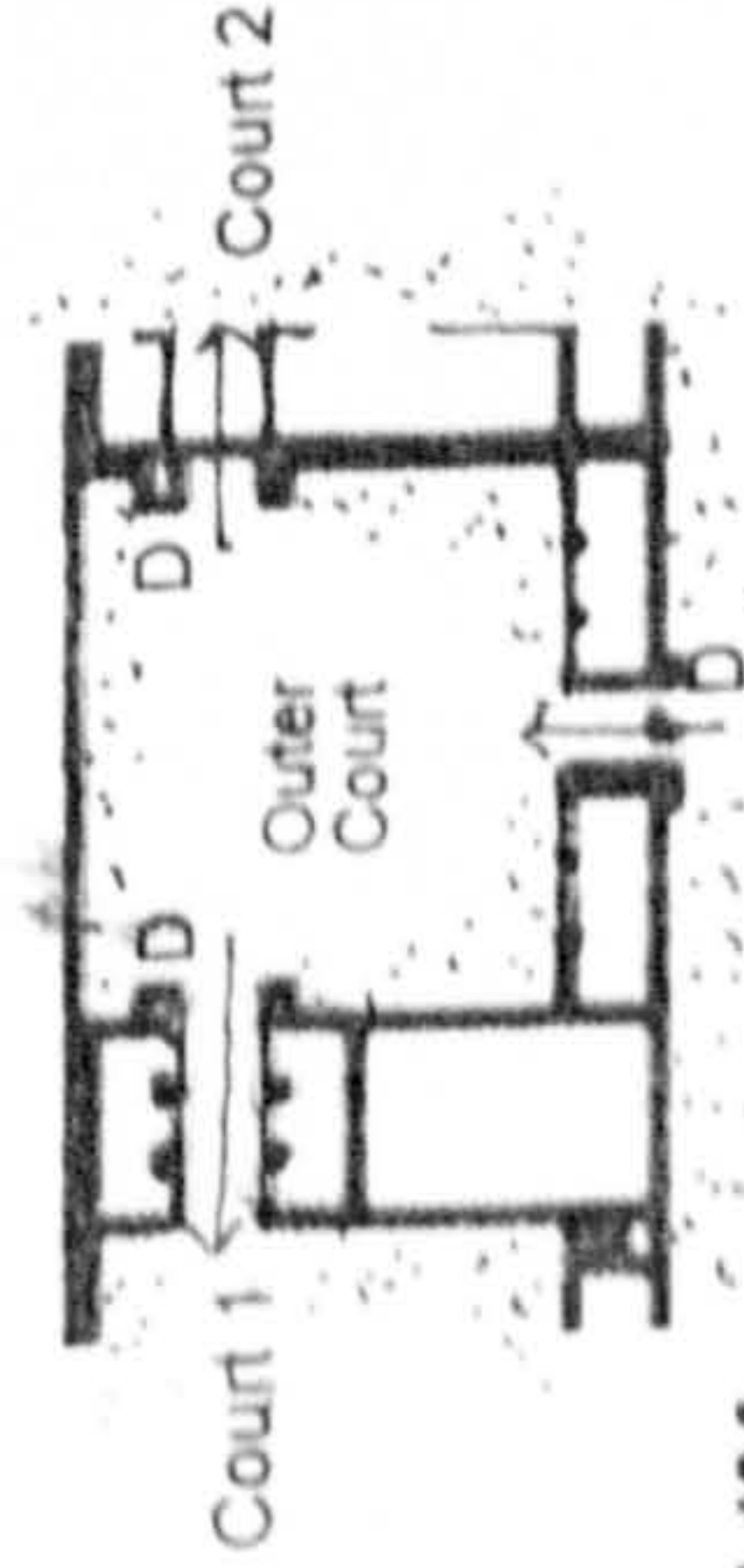


Outer Court

Inner Court

Court

MARWARI



Outer Court

Inner Court

MUSLIM  
OTHERS



## **Appendix– D - Format for Interviews and Observations**

### **Interview Background**

The interviews with *haveli* residents had an informal, conversational approach. Although an interview format is presented below, but this was used more as a checklist by the researcher. This is developed from the interview format by Lindsey Harlan (1992). Questions related to the ones below were asked from the *haveli* owners and different members of the family (male, female, young and old) people who have lived in the *havelis* or those who are still staying there. In most cases, the interviewees were forthcoming and just needed a cue to start. A wide sampling of interviewees from different castes and different areas of Rajasthan was taken. In total about 50 interviews were taken. The intention was to 1) gather factual information 2) to gather religious myths and stories associated with the *havelis* 3) an insight into the social system of the *haveli*. The data collected from interviews was further authenticated from observations and literary sources to reduce the 'bias' associated with interview surveys. The interviews were conducted in the local language to make the residents comfortable and to gather maximum data.

### **Interview with Residents of the *Havelis***

1. Name:
2. Father's/ Husband's Family: a) Place of Origin (state, thikana):  
b) Genealogy (Vansh, Kul):
3. Profession:
4. Introductory Question (open ended "warm up" questions)



- a. How does it feel to be in a *Haveli*? How would you describe the Haveli to someone who has never seen one?
- b. What were/are the daily chores of men and women inside the Haveli? How have they changed with time?
- c. Locate space for daily rituals, cooking, sleeping, ablutions etc.

## 5. Social Life

- a. What were/are the festivals celebrated in the Haveli?
- b. How was/is the *Havelis* used for celebrating functions of birth, marriage etc.?
- c. What was the status of male/female members and visitors in the *haveli*?
- d. Was *purdah* observed in the family and to what extent?
- e. What was the system of marriage in the family?
- f. Was there a special space for storing valuables?

## 6. Traditional and Historic Significance

- a. Are there any stories associated with the *haveli* (construction, owner)?
- b. Any rituals associated with the initial construction or expansions later one?
- c. Was the *haveli* always with one family or did it have owners from different caste/profession?
- d. Is the *haveli* still used for family rituals? What significance does it Have? (In case, the family has moved out.)

## 7. Religious

- a. Who was/is the Kuldevi of your family? Do you know any stories about her?
- b. Who were/are the other gods worshipped by the family?
- c. What were/ are the religious rituals followed in the family? (more for the females)
- d Was/ is there a specific place for daily prayers?



e. What does it mean to be a Rajput / Brahmin/ Marwari/ Muslim? How is it different from the other caste/ profession?

How is that incorporated in the Haveli?

f. Was/is non-veg. cooked and alcohol allowed in the Haveli?

g. Any symbolic significance of doors, outside /inside; any sacred areas in the haveli?

#### 8. General Closing Questions?

a. Is there any important thing about life in a *Haveli* that I have left out?

### Interview with Masons and Craftsmen

Another format for the interviews was used for the local mason, artists and craftsmen whose ancestors worked on the *havelis* or had knowledge of the traditional ways of construction. Locating traditional masons was more difficult than locating the traditional residents. In total only six masons from different areas of Rajasthan were interviewed. These interviews were also carried in the local language.

1. Name:

2. Genealogical linkages:

Name of Father or Master (*Guru*):

Training period:

3. Details of the *Haveli(s)* constructed by ancestors:

4. How were the plans explained to the owner?

5. What were the rituals followed before/during/after the construction process?

3. Questions about specific materials/ artwork etc. on site.

4. How would you start the construction of a *Haveli*? ...mark the site?

5. How would you make the foundations? Walls? Roof? What mortar was used?



6. How would you make a bracket? An arch?
7. How would you decide on the composition of façade?
8. Explain the norms followed in construction at all levels.
9. Do you refer any book for construction?
10. What is your relationship with the owner of the *Haveli*?
11. What were the procedures for payment of the work?

### **Observation Record of *Havelis*:**

1. Name of the *Haveli*:
2. Name and profession of the original owner:  
Name of the present owner:
3. Location:  
Approach:
4. Usage:
5. No. of family members (originally and present):
6. Profession of original owner:
7. Date:
8. Physical Description  
Materials used in Foundation, Walls, Floors, Roof and openings.
9. Architectural Style(s) observed in the Haveli
10. Expansions /Changes from the original plan.
11. Sketch of Plan/ Elev. or any specific details